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ABSTRACT

This doctoral dissertation investigated literacy and educational achievement among the adult Mexican origin population in the United States by means of a secondary data analysis of the 1979 National Chicano Survey (NCS). The unique contribution of this study is its focus on biliteracy (i.e., literacy across English and Spanish). Literacy characteristics in English and Spanish were described relative to demographic characteristics such as language background, age, sex, nativity, income, years-of-schooling, employment, and political participation. The relationship between literacy characteristics and attitudes toward language, bilingualism, and educational success were also explored. Major findings indicated that while non-functional literacy rates were high among Chicanos, the rates were far lower when Spanish literacy was included in the analysis. The study also found that while English literacy showed a stronger association with income, biliteracy showed a stronger association with employment. Biliteracy was also generally found to demonstrate a stronger relationship with political participation than English literacy, though English literacy also demonstrated a relationship. Spanish literacy showed a stronger relationship with voter registration than English literacy. The study concluded by making recommendations for the further study of literacy among Chicanos, and included recommendations aimed broadly at language and educational policies. (Contains 22 pages of references) (Author)

LITERACY, BILITERACY, AND EDUCATIONAL ACHIEVEMENT AMONG THE MEXICAN ORIGIN POPULATION IN THE UNITED STATES

Terrence G. Wiley

LITERACY, BILITERACY, AND EDUCATIONAL ACHIEVEMENT AMONG THE MEXICAN ORIGIN POPULATION IN THE UNITED STATES

by

Terrence G. Wiley

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DEDICATION

For Eileen, Kris, Kevin, and Aaron,

who had to sacrifice much

in order to support me in this endeavor.

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ABSTRACT

This dissertation investigated literacy and educational achievement among the adult Mexican origin population in the United States by means of a secondary data analysis of the 1979, National Chicano Survey (NCS). The unique contribution of this study is its focus on biliteracy (i.e., literacy across English and Spanish). Literacy characteristics in English and Spanish were described relative to demographic characteristics such as language background, age, sex, nativity, income, years-of-schooling, employment, and political participation. The relationship between literacy characteristics and attitudes toward language, bilingualism, and educational success were also explored.

Major findings indicated that while non-functional literacy rates were high among Chicanos, the rates were far lower when Spanish literacy was included in the analysis. The study also found that while English literacy showed the strongest association with income, biliteracy showed a stronger association with employment. Biliteracy was also generally found to demonstrate a stronger relationship with political participation than English literacy, though English literacy also demonstrated a relationship. Spanish literacy showed a stronger relationship with voter registration than English literacy.

The study concluded by making recommendation for the further study of literacy among Chicanos, and included recommendations aimed broadly at language and educational policies.

CHAPTER I
INTRODUCTION

OVERVIEW

This study investigates literacy and educational attainment among the adult Mexican origin population in the United States. The major research task involves a secondary data analysis of the 1979 National Chicano Survey (NCS). To date, the NCS remains the most ambitious attempt to profile the psychosocial adjustment and socioeconomic achievement of Chicanos.[1] Although other national surveys have attempted to describe the English literacy characteristics of Chicanos, the unique contribution of this analysis is its focus on biliteracy; thus, the relationship between literacy, language, schooling, and other important background factors, is explored across English and Spanish. In addition to its focus on biliteracy, this study also seeks to promote the analysis of

[1] The term Chicano is used in this study to refer to persons of Mexican descent, or origin, living in the United States. The term encompasses both the native born, immigrants, and undocumented persons. According to Cortéz (1980:697), the origin of "Chicano" dates to at least the turn of the century when it began to be used as an in-group term. He notes that while it may be seen as a pejorative by more senior individuals, it has increasingly gained acceptance among people of Mexican descent and the general public. Cortéz also notes that no single term of self-identification has been uniformly accepted by all persons of Mexican descent in the United States. While political connotations have sometimes been implied by the term, none are intended by its use in this study.

subgroups, such as Chicanos, to facilitate a better understanding of their special needs and characteristics relative to literacy and schooling. This dissertation is organized as follows: The first chapter provides a general introduction to the problems of illiteracy and low educational achievement as these relate to Latinos generally, and to Chicanos specifically. It explores claims made regarding the consequences of non-literacy and lack of adequate literate abilities, and of low educational achievement. The last section presents major questions addressed in the analysis of the NCS and describes the approach and design employed in this study.

The second chapter explores problem of defining literacy, and addresses the alleged cognitive and socioeconomic consequences of illiteracy. It reviews current views on the relationship between literacy and schooling and the promotion of literacy among language minorities such as Chicanos. The chapter concludes by synthesizing the extant research specifically related to Latino[2] and Chicano literacy.

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2 The term Latino is used in this study rather than the term "Hispanic" although the terms are roughly synonymous. While "Hispanic" is increasingly used by the media and governmental agencies in general discussions about peoples whose ethnicity can be traced to Latin America or Spain (see "Hispanic," in Thernstrom et al., 1980:462). Latino is used in this study as the preferred in-group term. Generally, both terms have been used in reference to such groups as Chicanos, Puerto Ricans, Spaniards, Cubans, and Central and South Americans, as well as individuals who have descended from early Spanish settlers of the Americas. It should be noted that no single term of self-identification has been uniformly accepted by all persons labeled as "Latino" or "Hispanic."

The third chapter provides a rationale for using a biliteracy measure and provides background information on the NCS (related to its conceptualization and design, sampling approach, and administration). Next, the methods used in the secondary data analysis are discussed. Key variables used are identified, and operational measures of literacy, language proficiency, and schooling characteristics are explained.

The fourth chapter is a presentation and analysis of the findings from the NCS. First, literacy characteristics are described using four different measures of literacy. Then, using a biliteracy measure of literacy across English and Spanish, it profiles the relationships between literacy and relevant background and demographic characteristics such as educational achievement, language abilities, nativity, income, educational achievement, and socioeconomic participation. The chapter also addresses attitudes among Chicanos toward language and bilingualism. It also discusses Chicano attitudes toward educational success or failure. Possible associations between these attitudes and the respondents' literacy characteristics are explored.

The final chapter summarizes briefly the problems addressed by this study, the procedures used to analyze the NCS, and the major findings of the study. Then it presents general conclusions and recommendations which have relevance for language and educational policies broadly conceived.

BACKGROUND TO THE PROBLEM

In recent decades, the debates regarding literacy and illiteracy have been panoramic in scope. They encompass research and speculation on the nature of literacy itself, and on alleged positive cognitive, social, and political effects which result from it. Unfortunately, there is little consensus about the nature and extent of illiteracy.

Since non-literate cultures are rapidly becoming literate, the march of human societies toward literacy is generally perceived as such an inevitability that non-literates are frequently identified as being "pre-literate." In countries such as the United States, where the majority are literate, and where free public schooling has been available since the early part of this century, the stigma of "illiteracy" is often characterized as both a major personal failure and as a major social crisis (Hunter & Harman, 1979).

The prevalence of widespread illiteracy and inadequate literacy skills is held to be significant since literacy is acknowledged to be requisite for effective functioning and full participation in this country's economic and social institutions (Vargas, 1986). For educators, non-literacy is a concern because literacy is usually acquired through formal instruction, and since continued educational achievement is dependent on effective utilization of literacy skills (Macías, 1986).

Amid the many issues related to the study of literacy, one theme which frequently emerges involves the alleged consequences of literacy. This theme is generally grounded in one of two contexts: (1) cognitive perspectives regarding the alleged qualitative differences in the mental abilities of literates and non-literates, and (2) societal perspectives which focus on social stigmatization, economic liabilities, political dis-enfranchisement or lower rates of political participation which result from a group's or an individual's lack of literate skills.

The extent of non-literacy, or of inadequately developed literate skills, is also the subject of much debate in this country. However, there is a general consensus that in developed countries, such as the United States, illiteracy or lack of adequate literacy abilities is a major problem (Kirsch, I.S., & Jungeblut, 1986; Hunter & Harman, 1979). One national estimate of literacy, the English Language Proficiency Survey (ELPS), places the non-literate adult population (over the age of twenty) at between 17 and 21 million (U.S. Dept. of Education, 1986). Yet, a fact that is sometimes lost, or at least embedded, within the various reports on the extent of illiteracy in the United States, is that many of those considered to be illiterate are members of language minorities.

Recently, several studies using various so-called direct measures of literacy have indicated that minorities, particularly Latinos and Blacks, are more likely to have lower level literacy skills than are typical among the Euro-American majority (Kirsch & Jungeblut, 1986). The ELPS survey estimated that 13% of the total

adult population was not literate. However, among adult Latinos, the percentage was much higher. According to the study, 22% of the adult non-literates in the U.S. were Latino. These figures are particularly striking because Latinos represented only about 6.4% of the national population at that time (Vargas, 1986).

There are different explanations concerning why illiteracy and lowered literate skills are more prevalent among Latinos than among the Euro-American majority. Low educational achievement (Kirsch & Jungeblut, 1986) and non-English language background (Ortiz, 1987) have been identified as factors which are most frequently associated with lowered literate skills--even when researchers have controlled for socioeconomic status. Regarding the problem of low educational achievement, Hunter and Harman (1979) note:

> Hispanic [Latino] groups, especially Hispanic women, have a noticeably lower level of educational attainment than either whites or blacks. All of those for whom English is not the mother tongue--about 30 million--face special educational difficulties [p. 43].

Illiteracy: Whose Problem?

Illiteracy and lower educational achievement are often seen as an individual's problems or handicaps. However, Vargas (1986), argues that illiteracy has dire societal consequences for Latinos and for the United States as a whole. He maintains that low levels of literacy and educational attainment diminish employment

prospects for Latinos. Latinos are also short changed since they contribute to this society as taxpayers, but are unable to reap the full benefits of citizenship because of low levels of literacy and English proficiency. In addition, Vargas argues that low levels of literacy and educational attainment also lessen the ability of Latino parents to influence favorably the education of their children. Concern for the role of parents in breaking the so-called cycle of illiteracy has also been echoed by Impink-Hernandez (1985).

From the perspective of national economic self-interest, Vargas suggests that the majority cannot afford to ignore a problem which is widespread among a substantial minority of its population. He notes that, whereas Latinos currently represent 6.7% of the labor force, they will comprise 8% to 9% of it by the end of this decade. In California, the Latino population is expected to represent nearly one third of the state population by the year 2000 (California Postsecondary Education Commission, 1985). Thus, lower levels of literacy and attainment for Latinos can be said to have an impact on the larger society as a whole since an increasing number of those paying into basic social programs (such as social security) are going to be found among minority groups, and particularly among Latinos.

Moreover, Vargas argues that low literacy levels among such a substantial portion of the total labor force cannot but have a negative impact on the national labor pool since: "In a technological society, the need for the nation's work force to be continuously replenished by adequately trained and functionally literate workers becomes increasingly important" (Vargas,1986:9).

In addition to economic concerns, lack of literacy has also been tied to differential participation in the political processes of this country and to societal benefits which are predicated on English literacy. Since political participation is seen as a responsibility of the citizenry in a democracy, widespread exclusion or non-participation is detrimental both to those who do not participate and to the representative process as a whole (Vargas, 1986).

Although literacy concerns are often addressed without a specific focus on ethnic groups (e.g., Fingert 1984; Hunter & Harman, 1979), by limiting its focus to Chicanos, this study attempts to use subgroup analysis as a means of better understanding the educational needs of one segment of the U.S. population. All too frequently, group differences and special needs tend to blur amid national statistics related to the problems of educational under-achievement and illiteracy. Rarely are categories in the national population broken down further than the census labels of: "White (non-Hispanic)," "Black," "Hispanic," "Asian and Pacific Islander," "Filipino," and "Native American" or "American Indian." The variation within these groups is generally as great as for the population as a whole. Consequently, in attempting to determine social and educational needs, it is necessary for subgroup analysis to go beyond labels which are of

more utility to census takers than to the people labeled by them.[3]

Moreover, there is also a need to profile more adequately the characteristics of subgroups who may be targeted for literacy programs. Classical educational theorists with views as different as John Dewey (1938) and Ralph Tyler (1949) have argued that the design of educational programs must begin with an understanding of the characteristics of the students for whom programs are intended.

At the close of the seventies, Hunter and Harman (1979) estimated that 68% of the nation's adult basic education students were studying English as a second language. However, since adult students as a whole, and students studying English as a second language specifically, represent a variety of groups with a variety of needs, it is not likely that a single program can adequately meet the needs of all students. Relevant demographic data can help in the planning process at the national and the local levels, and cannot but help to inform better educational policy makers and curriculum planners. Thus, from an educational perspective, there is a need to profile subgroups such as Chicanos and to recognize differences even within such subgroups.

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3 Clyne (1982) has discussed similar problems with ethnic labels used in the Australian Census.

DESIGN: A SECONDARY ANALYSIS OF THE NCS

The research design for this study is that of a secondary data analysis of the National Chicano Survey (NCS). As such, in profiling the nature and extent of literacy and educational achievement among the Mexican origin population in the United States, it is largely a descriptive study.

The NCS is an important data source because, to date, it is the most extensive national study undertaken on Chicanos. The NCS was conducted in 1979 by the Chicano Project of the Institute for Social Research at the University of Michigan under grants from the Ford Foundation and the National Institute of Mental Health's Center for Minority Group Mental Health. The major purpose of the study was to compile a statistically representative profile of the psychological, social, and economic status of Chicanos in the United States (Arce, n.d.).

In addition to its major focus on psychosocial and economic factors, the study included a number of variables related to literacy, education, and language. Consequently, it provides a rich data source for a secondary analysis which addresses literacy. It was also designed to take into account the bilingualism of the population so that the coverage and response rate, as well as the completeness of the data collection, would be improved over the

previous national surveys. Again, a unique feature of the NCS with respect to literacy is that it allows for an analysis of literacy in both English and Spanish.

Utilizing the NCS, this study compared the literacy abilities of Chicanos for English and Spanish, and across English and Spanish. Moreover, since oral language abilities among language minorities are held to have a strong association with literacy (Olson, 1977), the relationship between these abilities was profiled. Similarly, the relationship between language background and literacy in English among Chicanos were explored, since a strong association has been previously identified for Latinos generally (Ortiz, 1987).

In addition, since it is argued (Vargas, 1986) that economic achievement and political participation are strongly related to literacy, the relationship between literacy in each language and between schooling and socioeconomic factors were examined.

The study sought to profile the biliteracy characteristics among Chicanos. Since the magnitude of the so-called "literacy crisis,"[4] which has been the focus of national attention in recent years, may be more of an "English" literacy problem than a "literacy" problem, there was a need to determine the scope of English literacy and the extent of literacy in Spanish.

4 See Kozol (1985) for a discussion of the alleged "literacy crisis."

MAJOR QUESTIONS AND ISSUES

Utilizing the NCS, it was possible to pose a number of questions. Specifically, the most basic questions were: What is the distribution of literacy abilities among Chicanos across English and Spanish? What is the relationship between literacy and schooling among Chicanos? What is the geographic distribution of literacy abilities among Chicanos across the United States? What is the distribution of these abilities by nativity, sex, and age?

Since family literacy and educational background may be seen as important factors, another question was raised: What is the relationship between the respondents' level of education and literacy abilities and their parents' level of education?

In addition to these questions, the issue of the social and political participation of Chicanos is explored relative to these questions: What is the relationship between literacy across English and Spanish to economic success and political participation? To what extent are those literate in English or in Spanish likely to be employed, to have been employed recently, or to seek employment? To what extent are literates more likely to earn more or come from families which earn more than non-literates? Are literates more likely to seek employment than non-literates? Are literates more likely to register to vote, or to cast a vote, or to

affiliate with a political party. Are those with skills mostly in English literacy more likely to find and seek employment or to participate in politics than those with Spanish literacy skills? Do biliterates appear to have advantages over monoliterates relative to economic success and educational achievement?

Given the language diversity of the Chicano population, the following questions were posed: What is the relationship between one's dominant language and literacy across English and Spanish? What is the relationship between one's childhood language and one's literacy abilities?

Lastly, the study attempted to determine the predisposition of Chicanos toward the Spanish language, toward the advantages or disadvantages of bilingualism, and toward education by seeking answers to the questions: What are the attitudes of Chicanos toward using Spanish, having their children learn to speak, read, and write Spanish? What are the views of Chicanos regarding their own educational achievement and the reasons for educational success or failure? In attempting to answer these questions, the study sought to determine whether respondent literacy characteristics demonstrate a relationship with attitudes toward language and bilingualism, or toward education?

PRELIMINARY HYPOTHESES AND ASSUMPTIONS

Based upon the existing literature, a preliminary hypothesis is that the relationship between socioeconomic success, language background, and schooling will be relatively strong since these have been shown in previous studies to correlate with the extent of one's literacy (Kirsch & Jungeblut, 1986; Hunter & Harman, 1979). It seems likely that those literate predominantly in English would have an advantage over those literate predominantly in Spanish relative to economic success and political participation. However, the situation for biliterates is not as clear. Since it is likely that there are benefits to being orally bilingual within the Chicano community, it is predictable that biliterates may have some advantages, at least related to employment and possibly to income.

An association between nativity and language of literacy seems obvious because those born and educated in Mexico are more likely to be literate in Spanish than in English. Moreover, it may also be assumed that language proficiency will demonstrate a strong relationship with educational achievement and literacy (Cummins & Swain 1986; Cummins 1985, 1984a, 1984b, 1981).

Another hypothesis relates to biliteracy. Since literacy is an indicator of proficiency in a language, one can expect literate Chicanos to read societal materials (such as newspapers or books) at some minimal level and to write (e.g., letters) at some minimal

level, in either English or Spanish, it may be assumed that the extent of non-literacy among Chicanos will be considerably less than if the definition is restricted only to English literacy.

METHODS

The major data analysis task required crosstabulation of a biliteracy variable with language background and socioeconomic variables. While several alternative analyses of literacy were possible, biliteracy was the principal literacy variable used. Methods, and a rationale for the biliteracy measure, are described in greater detail in Chapter three.

DELIMITATIONS

Since the NCS survey design was determined prior to this study, survey questions of necessity are those of the original survey. This situation is far from ideal, and findings must be interpreted with an awareness of the problem of recurrent validity, which is inherent to secondary data analysis (Babbie, 1973:235).

THE UTILITY OF THESE DATA

These data should prove useful in discussions over (1) official language and literacy policies, (2) in debates related to the need for bilingual education, and (3) in discussions regarding curriculum planning for adult education. Since it is argued that literacy skills may be transferable from one language of instruction to another (Cummins, 1981, 1983, 1984a & 1984b, and Cummins and Swain, 1986), the study should be of use to educational program planners.

From the perspective of language and literacy policy, the information should be useful since functional literacy and access to services and political participation can either be restricted or broadened based upon whether or not literacy in languages other than English is recognized, accommodated, and utilized.

In addition, the biliteracy focus of these data should contribute to literacy profiles not available to date by providing a systematic profile of the association between literacy (in English and/or Spanish) and educational achievement, political participation, and economic achievement for Chicanos.

The data should also prove useful in helping to determine the direction and development of literacy services at the national level and in opening the way for the possibility of Spanish language literacy.

Finally, since literacy and level of schooling may also have some influence on perceived social status, more comprehensive literacy data (i.e., data which indicates literacy abilities in Spanish as well as English) should help to create a more favorable literacy image of Chicanos than data which ignores Spanish literacy, or by omission fails to distinguish between it and non-literacy.

CHAPTER II

REVIEW OF THE LITERATURE

OVERVIEW

Works reviewed and critiqued in this chapter fall broadly into three categories: (1) those related to the study of literacy generally, (2) those of relevance to the promotion of literacy in a second language, and (3) those which focus specifically on Chicanos.[1]

The chapter is divided into the following major sections:

[1] This review must begin with several important qualifications. Given the range and scope of issues which fall under the label of literacy, it is impossible to address adequately all, or prehaps even most, of the areas which are included under the heading. A recent computer search related to literacy produced approximately 5,000 titles of books, currently in print, related to literacy in English alone (not including journal articles or other periodical literature). A number of topics, and many authors, are not included. While some authors are cited in passing, the positions/ contributions of each would require much more space for full development. Since it is not possible to deal adequately with many of the important and interesting themes related to iteracy (e.g., literacy campaigns in developing nations, the role of different orthographies in text processing by readers, the relationship between linguistics and literacy, or literacy loss--just to name a few), no attempt will be made to address these issues. The intent, herein, is not to provide a comprehensive review of the literacy field; rather, it is to review important works of relevance to this study.

The first section represents a review of the literature relative to the problem of conceptualizing and defining literacy. The, next section deals with the notion of biliteracy and the impact of language attitudes toward monolingualism upon it. Section three deals with present and historical issues related to the problem of measuring literacy. The fourth section presents major issues in the study of literacy related to socioeconomic and ideological points of view. Section five reviews cognitive perspectives on literacy. The next section, incorporates issues from the socioeconomic, ideological, and cognitive perspectives as these relate to the role of schooling in promoting literacy and second language literacy by reviewing the so-called "Contextual Interaction Theory." The final section reviews the literature related to Chicano/Latino literacy and reviews recent recommendations regarding adult programs for Chicanos and other Latinos.

THE PROBLEM OF DEFINING LITERACY

Given the importance which is generally attached to literacy, defining the concept is of utmost importance for those concerned with the cognitive, social, economic, and political consequences of literacy. There is little consensus among scholars or lay people concerning what it means to be literate. Literacy

may be defined narrowly in terms of basic skills used in reading and writing. It may be seen as the ability to use print to fulfill various social needs; it may be seen as a social status which provides one with a sense of legitimacy, or it may be seen as a tool for personal growth or for political liberation.

From the standpoint of language policy, it is important to know whether definitions of literacy and attempts to measure its extent are to be limited only to dominant or official languages, or whether the definition is more broadly applied to any language in which one can use print with some level of proficiency or skill. For Chicanos and other language minorities this is significant since many individuals may be literate in Spanish (or other languages), but not English.

For educators, the conceptualization and measurement of literacy is important since schools are commonly seen as the places where initial literacy is acquired and reading and writing abilities are essential for schooling success. Even at the lower grades, literacy skills are measured to determine placement by grade levels, to diagnose skills, to estimate growth, or to determine the effectiveness of programs (Farr, 1969). For the adult population, reading and writing abilities may be measured to determine whether or not schools did their job effectively or to determine whether or not adults are functionally competent within our society.

While discussion regarding the importance of literacy is pervasive, the attempt to define it or make sweeping reductionist claims for it generates a myriad of questions as Kaplan (1984), has indicated:

> Can one claim that literacy is the ability to write one's name? If so, is there any qualitative difference between being able to write one's name in an alphabetically graphized language versus one which is graphized in ideograms? Or does literacy imply some set of skills--e.g., the ability to complete a form, to address a letter, to compose a letter, to write a list, etc. If literacy implies broader skills, what skills, in what combination, and to what degree? How does a definition of 'basic' literacy correlate with the notion of 'technical' literacy or with the notion of 'literary' literacy?...What does it mean when a government claims that its citizens enjoy a certain percentage of literacy? Under such circumstances, is literacy equally distributed among all segments of the population, or is it differentiated by sex, by economic status, by race, by religion, or by any number of other sociological variables [p. x]?

Despite these inherent difficulties, discussion about the consequences of literacy or of illiteracy cannot proceed far without the formulation of constructs of literacy or attempts to operationalize them for purposes of measurement. However, constructs rightly remain the subject of heated debate, and lack of consensus results in estimates of illiteracy which vary widely ranging from 15% to 50% (Venezky, Kaestle, & Sum, 1987).

Confounding the conceptualization of literacy is the wide application of the term *literacy*, and the fact that the term is often preceded by adjectives which give the term a connotation beyond activities which involve reading and writing. Consider the extension of the use of the term in reference to new areas, e.g., *computer literacy*, and *television literacy*. This extension does little to clarify the meaning of "literacy" or allow a consensus to form regarding its meaning (Macías, 1986).

Defining literacy is also problematic partly because it is not static. Resnick & Resnick (1977) as well as a number of other scholars (Clifford, 1984; Scribner, 1984) have noted that there has been a tendency for expectations regarding literacy to inflate, especially since the end of the last century.

The two most common definitions of literacy are the so-called conventional and functional definitions. The conventional definition of literacy limits the concept to the ability to read, write, and comprehend texts on familiar subjects and instructions, directions, and labels necessary to get along within one's immediate environment (Hunter & Harman, 1979:7).

While the conventional definition seems straight forward enough, for researchers it is problematic because there is no consensus on what reading and writing are. Szwed (1981), for example, appears to accept all uses of print as forms of reading and

writing, while Edelsky (1986) defines reading and writing as "universal processes of predicting and confirming to make meaning with print providing pragmatic, linguistic, and conceptual cues in particular social situations" (p. 170). Edelsky does not feel that merely using a text to recite a passage necessarily means reading has occurred, nor does she see the ability to copy script as meaning writing has occurred.

The functional definition is no less problematic. The functional definition focuses on predetermined tasks which involve the use of reading and writing to fulfill a social or economic purpose; functional literacy is seen as situationally based within particular contexts in order to meet the demands of society and solve problems. Often, it is viewed from the perspective of a minimum competence level (Hunter & Harman, 1979). Literacy from this perspective is not generalizable to all activities. Thus, much of the current discussion concerning the scope and consequences of illiteracy is focused on adult functional competence.

It is important to note, however, that Hunter and Harman have added an important qualification to the notion of functional literacy: They contend that an individual or group must be able to fulfill self-determined objectives. Literacy from this perspective, then, is situationally based, and is individually defined.

While ethnographers of literacy would be comfortable with this qualification, unfortunately, most taxonomies of so-called functional literacy are formulated by an elite or professional group who attempt to determine minimal literate competencies. For example, functional competencies may be determined by advisory groups composed of educators and employers or surveys of adult basic education students. Thus, such taxonomies are not necessarily grounded in ethnographic research, nor do they necessarily meet Hunter and Harman's criteria of identifying the self-determined objectives of individuals or groups themselves. The ideological implications of prescribed standards of literacy are discussed (below) in this chapter.

An ethnographic perspective is useful in providing a description of meaningful functions of literacy. Whereas taxonomies of functional literacy are often *apriori* and prescriptive, ethnographic descriptions are based upon what people actually do with literacy in their own social and cultural contexts (Heath, 1980). More importantly, they are based upon the meaning that these activities have for those who do them, irrespective of the views of elites or outsiders. Thus, ethnographic perspectives usually go beyond focusing on economic needs; rather, they include those literacy activities which people find meaningful such as those related to interpersonal communication, entertainment, and leisure.

The following list summarizes the functions of literacy (in one community) which emerged from Heath's (1980) ethnographic approach to literacy:

(1) In its instrumental function, literacy provides practical information used in transportation or daily business transactions.

(2) From a social-interactional perspective, it provides information useful in daily social communication as illustrated by letter writing and the sending of greeting cards or the reading and writing of recipes.

(3) Literacy has a major news-related function.

(4) Literacy has a memory-supportive function which is illustrated by the use of calendars, telephone books, and appointments books.

(5) Literacy is a substitute for direct oral communication as in the case of parents and teachers conveying messages by means of notes.

(6) Literacy provides a basis for the keeping of permanent records of an official nature.

(7) Literacy provides a basis to confirm beliefs which are already held, as in the case of appealing to authoritative texts such as dictionaries, code books, or religious texts.

LITERACY VERSUS BILITERACY: THE PROBLEM OF DEFINING LITERACY IN MONOLINGUAL SOCIETIES

Understanding literacy in a "monolingual" society, such as the United States, requires understanding English language shift, attitudes toward non-English languages, and the relationship of language proficiency to literacy. Macías (1984b) maintains that the English-speaking majority holds a general expectation that non-English-speaking peoples should and will learn the English language. He notes that this view is, in part, based on the erroneous assumption that all non-English languages are only "immigrant" languages. Kloss (1971) has noted that, based upon this "immigrant" perspective, many believe that one's "foreign" language should be given up as a kind of "right-of-passage." Certainly, with respect to a number of indigenous languages, the "foreign" language label does not apply, even if one could accept the so-called right of passage argument. Historically, English and Spanish are more accurately characterized as colonial languages.

Another popular notion that many lay people and scholars hold is that a shift toward the use of English language is inevitable. Veltman (1983) has made a strong case for the unidirectional nature of language shift toward English, even among the largest language minority, Spanish-speakers. What is interesting about

Veltman's position is that he argues there is not only a general tendency of language shift toward English, but also that any movement away from English is so negligible, as to be equal to zero. His argument is worth presenting at length in his own words.[2]

> There is almost no in-migration into language groups from the English language group. We are not here referring to the numbers of people from English language backgrounds who learn a minority language. Rather, when we speak of linguistic migration into a language group, we require that a person of English language origin adopt the minority language as his principal language of use. This is a rather stringent test....What is important to understand, however, is that in terms of this definition, there is virtually no linguistic in-migration into minority language groups. A high degree of bilingualism in a minority language does not constitute linguistic immigration. A linguistic immigrant to the Spanish group is someone who 'becomes' Spanish-speaking in the full sense of the term. He is an active participant in the daily life of the Spanish language group, not someone who simply speaks Spanish, however well [pp. 12-13].

Despite the fact that the United States is the fourth largest Spanish-speaking nation in the world (Simmon, 1980), Veltman holds his findings indicate that his claims are equally true for Spanish. It is interesting that in Veltman's "stringent" definition,

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[2] For a broader range of issues dealing with language loss, see Lambert and Freed (1982).

the *bi* of bilingualism does not appear to count. The shift is portrayed as an either/or dichotomy. One is either an English-speaking person or a Spanish-speaking person. By virtue of facility in English, one is apparently in the world of English regardless of his or her facility in Spanish. Among bilinguals, despite their facility in English, it seems likely that some individuals would drift more toward the world of Spanish if, for example, their spouses were dominant in Spanish, or their friends, families, and co-workers used more Spanish than English.

Moreover, despite general drifts toward English across language minority groups, Fishman (1980b, 1966), for example, has discussed the phenomena of language loyalty and maintenance. There are many reasons why some do not shift to English--such reasons as cultural identity facilitated by language loyalty and even physiological factors related to advanced age or to aphasia. Thus, some individuals lose facility in English or cease identifying with and using the language (Wiley, 1986).

Based upon the assumption that the shift toward English is inevitable, or based upon the argument that the use of English is a requirement as a right-of-passage, it is not surprising that, in most general discussions about literacy in the United States, little distinction is made between literacy and English literacy. Vargas (1986) has noted that most measures of literacy used in the United

States are inadequate to describe the characteristics among Latinos because no common survey definitions include literacy in languages other than English. Thus, literacy is confused with English literacy.

This reduction of literacy to English literacy appears to be related to language attitudes in this country. The United States is frequently characterized as a monolingual nation. Common language attitudes in the United States have led Simmon (1980) cynically to characterize the United States as the "land of the monolingual." But what about more scholarly views? Are these also influenced by the notion that this country is a monolingual nation? In this regard, Bhatia (1984) maintains that, even in theoretical discussions of literacy, a number of tenuous assumptions are made regarding the linguistic situation in so-called monolingual societies such as the United States. These include four basic assumptions:

> (1) in comparison to multilingual societies, linguistic diversity in ML [i.e., monolingual] societies; (2) the phenomenon of mono-lingualism has a feeding relationship with literacy, whereas multilingualism induces a bleeding relationship...; (3) communication problems are more severe and complex in multilingual than in ML societies..., and (4) the linguistic situation is too obvious to warrant any serious language planning in ML societies [p. 24].

Following Fishman (1967), Bhatia argues that the situation in so-called monolingual societies is more complex than this since the sociolinguistic literature indicates "that monolingualism in a speech community is a myth, because no speech community is either linguistically homogeneous or free form variation" (Bhatia, 1984:24).

Bhatia contends that the persistence of the notion of monolingualism reflects the dominant relationship of one language over others. This relationship is manifested in, and facilitated by, attitudes toward dialect, register, etc. Attitudes toward non-English literacy may be seen as tied to the same attitudinal set.

Another area of importance in understanding the literacy in predominately monolingual societies, such as the United States, is the relationship between second language literacy and second language proficiency. Vargas (1986) maintains that limited language proficiency is commonly confused with illiteracy; it is often assumed that limited proficiency in English "causes" English illiteracy. While one may have proficiency in Spanish and be literate in Spanish these abilities are not recognized or not seen as important because of the dominant language attitudes of the majority.

Vargas (1986) maintains that what is not understood (or acknowledged as being important) is that many who read and

write in English may not be orally fluent, and that many who are orally fluent in English, among Chicanos, may not be English literate. Obviously there are so-called "illiterates" among fluent English speaking monolinguals as well. Thus, Vargas argues that the problems of becoming literate in a second language need to be differentiated from the problems of learning a second language and the problem of becoming literate for the first time in a first or second language.

Fishman (1980a) has noted: "...it may seem rather indelicate...to stress...that biliteracy--the mastery of reading in particular, and at times also writing, in two (or more) languages--is not at all a rare skill among that portion of mankind that has successfully won the battle for literacy" (p. 49). Especially with reference to language minorities such as Chicanos, it is predictable that biliteracy and non-English literacy, i.e., literacy in only Spanish is also not rare. To the extent that this is true, claims made regarding the extent of illiteracy (meaning English illiteracy) among Chicanos and other language minorities must be re-evaluated. Moreover, the assumption that English literacy is the only literacy which "counts" must be seen as reflective of the dominant position held by the majority, English-speakers.

While it is true that English holds the dominant position within the United States, it does not necessarily follow that English

literacy can or should fulfill all of the needs of a predominantly bilingual language minority group such as Chicanos. Nor does it follow that there are no positive benefits to the majority in developing biliteracy among themselves (Simmon, 1980). In this connection, Fishman (1980a) has noted that there are many kinds of biliteracy which fulfill a variety of functions.

SOCIOECONOMIC AND POLITICAL PERSPECTIVES ON LITERACY

The Dilemma of Rising Expectations and Rising Standards

While some indicators of literacy, such as grade-level achievement, point to recent gains among Latinos, and Chicanos specifically, such gains must be seen relative to the larger sociohistorical context, since universal adult literacy, and even high school completion, have become common expectations.

In this regard, Resnick and Resnick (1977) provide a useful analysis from an historical perspective of the rise in expectations. They analyze three historical patterns of literacy education in Europe and the United States: (1) Protestant-religious education, (2) elite-technical education, and (3) civic-national education. They conclude that current expectations regarding mass literacy have been held for, at most, three generations. Whereas past

literacy models aimed at achieving either a high level of literacy for elites or low levels for a large number of individuals, recent calls for high levels of mass literacy can be seen as attempting to take a standard which once applied only to an elite and apply it universally. This rapid extension of literacy criteria, which were once applied only to select populations, raises the issue of the appropriateness of instructional methods and goals, especially since not all segments of the population have come to demand them. In recent years, however, the conventional view of literacy, and to some extent the functional view, has given way to a broader notion of what it means to be literate. Resnick and Resnick note that recently the criterion applied to literacy in the United States emphasizes the ability to read new material and glean new information from it (p. 371).

This rise in expectations regarding literacy and education has not been without negative consequences. Several authorities have argued that, as expectations have risen, and as literacy competencies have increased throughout society, the widespread possession of any particular competency has come to be devalued. Levine (1982) suggests that workers in the unskilled sector must increasingly demonstrate a level of competence higher than one which would have been respectable in an earlier period. Collins (1979) has made a similar argument regarding the tendency to

devalue educational credentials as these become widespread. Collins' argument is interesting because he holds that there is often little relationship between educational credentials and job skills.

Extending this argument, Levine (1982) sees a parallel inflation and corresponding devaluation of literacy outside of work. Individuals must attain minimal mastery to "pass" as literate in public. As literacy programs and schools more effectively equip their students with literacy skills, the acceptability threshold continues to rise. Consequently, there can be no final level of attainment wherein the disadvantages of illiteracy and semi-literacy can be eliminated so that the less literate can compete on an equal basis for jobs or command the same status as those who are more literate. The implications of this for language minorities in low socioeconomic status groups should not be lost since marginal gains in educational achievement within these groups may not translate into greater economic success relative to the dominant society (when standards for the dominant sector of society are likewise increasing).

The pessimism inherent in these views results partly from literacy being seen as an individual attribute or ability. Indeed, inability to demonstrate literacy skills and low educational achievement are seen as individual failures rather than as the result of inappropriate educational policies or inadequate

curriculum models. Thus, it is important to acknowledge another perspective which sees literacy as not merely an individual achievement, but as a social achievement (Scribner & Cole, 1978) acquired by individuals through social participation. Thus, literacy becomes a status marker ascribed to individuals by groups in power (Erickson, 1984).

Levine (1982), and Street (1984), analyze literacy as "social practices" which reflect prevailing political and structural realities. Levine sees transactions entailing reading or writing as including both those activities in which an individual *wishes to engage* and also those in which an individual may be *compelled to engage* (1982:264). Graff (1979), notes that while literacy has been promoted as a remedy for social ills, gains in nineteenth century literacy actually resulted in increased social stratification rather than in promoting more equality and democracy, as was expected.

Historically, according to this argument, many policy makers saw literacy as a normative agent. Street and Graff maintain that mass literacy campaigns hide a deeper motive which is to pacify and control those who do not conform to the normative middle class expectations.[3]

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[3] See also Cook-Gumperz (1986) for a useful discussion of the role of schooling as an instrument of both controlling and promoting literacy preceding, and during, industrial development.

"Literacy as power" emphasizes the relationship between literacy and the advancement of a group or community (Scribner, 1984) . Literacy is seen as a means by which the poor and disenfranchised can either gain access to societal resources and benefits, or use literacy as a tool to transform society. This latter position has been most notably pursued by Paulo Freire (1970a).

It is important to note that, in terms of the goals of most educational programs in this country, it is very rare to find statements about empowerment or the value of literacy instruction in promoting it. All too often illiteracy is treated as the cause of the lack of social and economic mobility rather than as a consequence of discriminatory practices and lack of opportunity.

COGNITIVE PERSPECTIVES ON LITERACY

In human evolution, the development of tools and language are often pointed to as the critical achievements which have helped to separate the species qualitatively from the rest of the animal kingdom. Just as technology has had its consequences on human societies, it is commonly held that writing, as a technology, has had its consequences as well. The development and widespread use of writing systems is often seen as qualitatively separating one society from another. Moreover, a number of

claims have been made concerning the effect which literacy has on cognitive development of individuals. Unfortunately, most comparisons of literates and non-literates have been confounded by other variables; the most problematic is schooling. Most literates have been to school. Consequently, it is difficult to determine whether alleged cognitive consequences of literacy are actually the result of literacy, or whether these are the result of practices and treatments inherent within formal instruction.

This section reviews and critiques some of the major claims regarding the alleged differences between orality and literacy, and the so-called cognitive consequences of literacy. Although this section departs from the focus on literacy and illiteracy among Chicanos specifically, it is useful to understand many of the assumptions which underlie both scholarly and lay opinion concerning literacy and illiteracy. The extent to which whole groups of people are less literate than others is especially problematic if, as many authorities hold, there are qualitative intellectual differences between the literate and non-literate. These presumed differences often provide the motivation for both educators and social policy makers to attempt to eradicate illiteracy. More importantly, these assumptions may also contribute to the stigma which is attached to illiteracy as a negative status marker, and they may thereby add to the social

stigmatization of groups, such as Chicanos, who are seen as having higher rates of illiteracy than the majority.

The position taken in this section (with Gee, [1986] and Street [1984]) may be considered "revisionist." It is intended to point out some of the ideological implications of Goody and Watt (1963), Ong (1982), and Olson (1982, 1977), if their views are uncritically accepted. While some cognitive differences may exist, and while lack of literacy may prevent individuals from achieving their ends, it is important to note that notions of superiority and inferiority are easily manipulated as instruments of social control.

Following a brief review of the so-called "great-divide" view, or "autonomous model" (Street, 1984) of literacy, the major claims about the qualitative differences between orality and literacy as put forth by Ong (1982) are presented. Ong's position has been paralleled, and complemented by the work of Goody and Watt (1963), Olson (1982, 1977), and Havelock (1963).

In the last part of this section, a different position regarding the alleged cognitive consequences of literacy is presented based upon a brief review of the work of Scribner and Cole (1981, 1978). These researchers have addressed the issue of cognitive consequences by assessing the transferability of various literacy practices. Unique in their approach is their recognition of potentially confounding variables such as schooling.

The "Great-divide"

Goody and Watt (1963) argue that the development of an easy writing system (alphabetic) led to major intellectual changes in ancient Greek society which set the stage for cognitive changes between non-literate and literate societies. Unlike oral societies which, according to Goody and Watt, are able to maintain a homeostatic balance by transforming and forgetting those elements of tradition which are nonessential, literate societies must confront their past beliefs which are maintained in written records. Since the past is stored in records, a schism is seen to develop in mythic time thereby giving way to historical time. Unable easily to readjust the past to fit present needs because of the permanence of written records, the historical consciousness gives rise to skepticism regarding the legendary past which, in turn, gives rise to skepticism.

Goody and Watt argue that, confronted by skepticism, there arose the desire to test alternative explanations. Moreover, they argue that the process of writing is itself more analytic than the process of speaking, since the habitual use of separate, isolated, formal units must be properly applied to convey thought. Consequently, they feel that formal logic probably could not have arisen without the development of writing.

An interesting characteristic of much of the literature related to the "great divide" notion is its Eurocentric focus. The Greeks, for example, are portrayed as the sole inventors of logic (ancient achievements in logic by the Indians and Chinese are not acknowledged).

Goody and Watt argue that in the modern world, oral traditions and literate traditions exist side-by-side, in a state of tension. A residue of the conventions of the oral tradition are seen as appearing in texts where that tradition is more dominant than the literate tradition. David Olson (1977, 1982) contends that literate parents are more "literate" in their speech and thought processes than less literate parents. He maintains that literacy increases the metalinguistic awareness of literate parents and that this metalinguistic awareness is reflected in their speech and oral interactions with their children. He concludes that this "literate" metalinguistic awareness then helps to facilitate the acquisition of literacy among their children.

Goody and Watt note that the literate tradition can be avoided and that there is an undercurrent of nostalgic yearning for the mythic unity of past oral traditions. Oral thinking from this perspective, then, represents the antithesis of literate, logical, thinking. Moreover, good thinking becomes associated with good writing. Wright (1978) has noted that educational policy makers

and curriculum planners in the United States have, since the 1890s, likewise tended to view non-standard language as less logical than standard language. They have tended to emphasis correct form of the language rather than specific content. The model for correct form has generally been based upon the standard written language (Street, 1984; Stubbs, 1980).

Claims in Support of the "Great-divide" and Critiques of the Claims

Ong (1982) presents a series of what I will term propositions which support the "great divide" view. These are briefly reviewed and critiqued below, where relevant questions or issues may be raised.

Ong (1982), like Goody and Watt, argues that the origin of various cognitive differences between literate and oral cultures is based upon the inherent differences between the media of print and speech. Speech relies on sound, and sound is transitory. Unlike print, speech cannot be stopped and frozen for observation. It is impermanent. Few would argue that speech and writing are the same. Since Ong argues that the impermanence of sound produces cognitive effects, the difference becomes a qualitative one. The restriction of words to sounds determines both mode of expression and mode of thought in oral cultures (Ong, 1982:33).

With Havelock (1963), Ong contends that thought is intertwined with memory systems, thus mnemonic processing even determines syntax. Ong argues that, thought must become heavily rhythmic requiring "balanced patterns, in repetitions or antitheses, in alliterations and assonances, in epithetic and other formulaic expressions, in standard thematic settings...in proverbs which are constantly heard by everyone" (p.34). He sees oral style as utilizing more conjunctive or additive devices than literate thought which he sees as promoting the subordination of some ideas to others (Ong, 1982:37).

With Levi-Strauss (1966:245), Ong argues that the savage (oral) mind totalizes. Moreover, he sees oral expression as carrying a load of cumbersome, redundant, formulaic baggage which is generally rejected in so-called "high literacy" (Ong, 1982:38). According to Ong, the use of fewer descriptive adjectives in formal (English) writing indicates its more analytic nature.

Since sound is unidirectional, Ong argues that writing requires less redundancy and amplification. The reader can always return to the text and backloop if distracted. He argues that writing styles of the Middle Ages and Renaissance, which were products of a predominantly oral society, are annoyingly bloated by modern standards because of the residue of oral culture which was still an influence upon writers.

Moreover, oral cultures are seen as being more intellectually conservative than literate cultures and less open to intellectual experimentation (Ong, 1982:41). Ong maintains that knowledge in oral societies is difficult to preserve since the spoken word vanishes just as soon as it is uttered. Consequently, given the energy which must be expended to preserve what has been learned, tradition and preservation outweighs experimentation. Writing is less taxing since the context of thought can be "stored" outside the mind. Here Ong's argument takes the form of a kind of "conservation" of energy. The technology of writing frees up the mind's energies so that it can be directed at analysis rather than memory. Oral cultures are of necessity more concretely grounded in the immediate world of human interaction whereas literate cultures are more able to deal with abstraction.

Ong argues that, unable to store knowledge outside the mind, individuals in oral cultures must ground or contextualize their knowledge in the immediate world of concrete and familiar experience. He maintains that oral cultures are "little concerned with preserving knowledge of skills as an abstract, self-subsistent corpus" (p.43). Conversely, writing allows for more detached and, therefore, more abstract thought. Oral cultures are more agonistically toned.

Writing is seen by Ong as allowing for a greater degree of objectivity in the sense of disengagement from personal identification. Distancing is seen as possible, since writing separates the knower from the known. Conversely, communication in oral cultures is characterized as more personal and thereby more participatory.

Wright (1978) has taken a different view. Rather than arguing that proper form in writing is an indication of logical thinking, she suggests the "literate" distrust of oral conventions in writing, such as the use of personal pronouns, reflects class biases concerning what is proper rather than formulas for clarity of thought. Consequently, distancing and the impersonalization which are manifested in certain types of writing may also be interpreted as stylistic, class-based, or cultural preferences rather than cognitive consequences of writing. Labov (1970) has noted that the tendency to distance oneself from the topic through stylistic devices does not necessarily improve the logic of the presentation. Thus, while these authors do not deny that differences exist, they note that differences in style need not necessarily be equated with the attribution of labels of cognitive "superiority" and "inferiority."

Ong's stigmatization of so-called oral devices such as the "over" use of adjectives and devices of redundancy as being representative of the "savage mind" parallels the intolerance of

many English teachers who argue that such stylistic devises are inappropriate, or outright illogical, when they are in writing. Whether these are culture-specific considerations of style, peculiar only to so-called proper writing of the Seventeenth Century British essayist tradition, as Street (1984) argues, or whether they are more universally held across literate cultures, is a topic worthy of further investigation.

Ong (1982) argues that oral societies have a relatively easy time of maintaining an equilibrium since they can rid themselves of memories which no longer have relevance for the present or readjust genealogies or other historical accounts to match present purposes. Literate societies, on the other hand, are depicted as being bound by written records and dictionaries which allow deeds and meanings to become more fixed and allow for more critical scrutiny. Yet many literate societies have been successful in revising, forgetting, or suppressing information regarding negative or distressful elements of the past from present consciousness. However, anthropologist Edward T. Hall (1959), has noted that remembrance of past events tends to vary among cultures. He contends that in some oral societies there is a remarkable ability to recall past events.

A frequent argument put forth by Ong (1982) and Olson (1977) is that literacy lends itself to more abstract thought than

does orality. A similar argument has been made in terms of some forms of thought being more embedded or context dependent than others. Ong bases much of his argument on Luria's (1976) studies of the ability of non-literates and literates to classify objects. Luria found that those who had been to school for even a short period of time, could perform a much more abstract level than the non-literates.

Contrary to the "great divide" or autonomous position, the work of Street (1984), Wright (1978), Leacock (1972), and Labov (1970), and more recently of Gee (1986) indicates differences of oral versus written language may be interpreted as cultural or class preferences rather than as necessary indicators of the logical superiority of one mode of communication over another. Moreover, the assumption that oral communication is somehow necessarily less abstract than written communication has been challenged by Leacock who cites a number of examples of logical, abstract uses of oral communication, including examples in which nonstandard language is used.

The tendency of the "great divide" scholars (and many English teachers) to dichotomize cognitive styles into categories such as literate versus oral, concrete versus abstract, or embedded versus disembedded, has not been lost on scholars such as Gee (1986) who argues persuasively that such attempts represent a

new, more subtle version of the savage-versus-civilized dichotomy:

> Societies labeled primitive were usually small, homogeneous, non-literate, highly personal, regulated by face-to-face encounters rather than by abstract rules, had a strong sense of group solidarity. They were sometimes said to be 'mystical and pre-logical'...incapable of abstract thought, irrational, child-like,...and inferior to modern man [*Note:* Gee appropriately qualifies his use of the term man; 1986:720-721].

Gee notes the similarity between Ong's contemporary version of this dichotomy and the positions taken by linguists and educators. Gee charges that Ong is aware that many of his claims for regarding the cognitive limitations of non-literates are applicable to individuals of lower socioeconomic status who are less influenced by school-based literacy than are members of the dominant "middle" class. He adds:

> ...[I]t is striking how similar Ong's features are to characterizations that linguists have offered of the differences between speech and writing, educators of the differences between 'good' and 'bad' writers, and sociolinguists of the differences between the way black children of lower socioeconomic status and the way white middle-class children tell stories [Gee, 1986:726].

Gee further notes that claims for literacy tacitly seek to "privilege one social group's ways of doing things as if they were natural and universal" (p. 731). The implications of Gee's comments regarding the scholarly stigmatization of groups such as lower socioeconomic status blacks, are equally applicable to language minorities such as Chicanos of lower socioeconomic status.

Similarly, Silvia Scribner and Michael Cole (1978) have raised a number of important questions regarding the implications of the "great divide" notion for consequences of literacy. They ask:

> If...we believe that literacy is a precondition for abstract thinking, how do we evaluate the intellectual skills of non-literate people? Do we consider them incapable of participating in modern society because they are limited to the particularistic and concrete? If we believe that writing and logical thinking are always mutually dependent, what do we conclude about the reasoning abilities of a college student who writes an incoherent essay? Is this an automatic sign of defective logic? Answers to these questions have implications for social and educational policies [p. 449].

Literacy from the Perspective of "Practice"

As we have seen, the claims upon which the "great-divide" view may be influenced by the cultural and class biases of those who hold them. However, this does not mean that we should

assume there are no differences in the cognitive abilities of individuals living in highly literate societies and individuals living in non-literate societies. Surely, Vygotsky, Luria and others have found differences. The major problem is how do we account for these differences. Are these consequences of literacy? Or are there other factors which should be taken into consideration such as the process and culture of schooling?

Scribner and Cole (1978) note that in several important studies on the alleged differences between oral and literate cultures schooling became a confounding variable (see: Greenfield, 1972; Bruner & Greenfield, 1966; Olson, 1977). According to Scribner and Cole, "global" claims for alleged cognitive differences are based upon research which involve the analysis of "specific" literacy tasks:

> A defining characteristic of the developmental perspective is that it specifies literacy's effects as the emergence of *general mental capacities*--abstract thinking, for example or logical operations--rather than *specific skills*. These abilities are presumed to characterize the individual's abilities across a wide range of tasks. Thus, based upon a limited sample of performance in experimental contexts, the conclusion has been drawn that there is a *great divide* between the intellectual competencies of people living in oral cultures and those in literate cultures [1978, p.451; italics are mine].

Scribner and Cole argue that the "great-divide" perspective parallels an old debate in education regarding whether learning is specific or whether learning strengthens the mind in a general way. They note that Thorndike, a major influence on curriculum design since the World War I era, concluded that learning is largely skill specific. Consequently, literacy instruction (defined as reading and writing skills) and subject matter instruction generally, have been taught as discrete skills which can be identified in behavioral objectives and tested. Most of the empirical evidence in support of claims regarding literacy's cognitive effects have been based upon specific tasks (as generally measured by standardized tests). Ironically, then, claims for *global* qualitative differences between the literate and not literate (regarding competence and proficiency) are based upon tests which measure rather limited or specific tasks. Moreover, most of the tasks associated with literacy are those of the type carried out within the culture of the school.

If there is a "great-divide" which is associated with literacy, it would be desirable to know whether it is more a result of schooling or of literacy generally. In order to separate the effects of school-based literacy tasks from literacy tasks which occur outside of school, Scribner and Cole (1981) propose a functional framework which defines literacy as practice (i.e., that it is task specific and context specific).

The Vai Studies of Scribner and Cole

Since earlier efforts to study the cognitive effects of literacy had been confounded by schooling, Scribner and Cole (1981, 1978) looked for a society with individuals who were literate, but who had not been to school. They found such individuals among the Vai people of Liberia. The Vai are a multilingual, rural people. The language of schooling is English. However, Arabic is learned by some Vai to facilitate religious text reading. In addition, some Vai men are able to read and write a syllabic Vai vernacular which is not taught in school.

Scribner and Cole (1981) set up a number of literacy tasks designed to test various functions of literacy or of functions associated with literacy. Broadly the cognitive tasks involved tests of: (1) categorization, (2) memory, (3) logical Reasoning, (4) encoding/decoding, (5) semantic integration, (6) verbal explanation

Scribner and Cole compared results between those Vai who were literate and who had attended English schooling, those who were literate in Qua'ranic Arabic, those who were literate in Arabic, and those who were literate in vernacular Vai, but were unschooled. They found that literacy apart from schooling, did not substantiate the high expectations held by scholars who subscribe to the "great-divide" view of literacy. Neither literacy in syllabic Via nor in Arabic alphabetic was found to produce the expected

cognitive effects of increased ability in categorization tasks nor in fostering a shift to syllogistic reasoning, nor in the adequacy of verbal explanations about task performed, nor in greater use of categorical labels.

Although both Vai and Arabic literacy were found to contribute to preference for form and number in tasks requiring geometric sorting, these results were attained only among biliterates. Significantly, biliteracy was found to be an unexpected confounding variable, the effects of which Scribner and Cole were unable to explain.

What then of the effects of schooling? Here the results were mixed. Scribner and Cole found that Vai who had attended English school generally had increased ability to produce verbal explanations regarding the principles involved in performing various literacy tasks. They note that while these results are consistent with those of previous researchers, this is the first time that schooling effects on verbal performance have been demonstrated apart from the effects on the tasks themselves. The fact that the official language of schooling was English rather than Vai might lead some to speculate on a kind of Whorfian influence of the language itself, apart from schooling, but Scribner and Cole found that merely speaking English was not salient in demonstrating increased scores on verbalization.

Significantly, however, schooling could not account for cognitive abilities in a number of areas. For example, Scribner and Cole did not find schooled Vai more adept at tasks involving an abstract attitude as in geometric sorting tasks (confounding factors appeared to affect the findings). Positive cognitive effects appeared to be associated with urbanization, multilingualism, and biliteracy. Attempts to find a correlation with the amount of schooling yielded only a partial explanation. Regarding the effects of schooling, they concluded:

> Our results raise a specter: even if we were to accept as a working proposition that school produces general changes in certain intellectual operations, we might have to qualify the conclusion to refer only to students, recent ex-students, or those continuing in school-like occupations [1981:131].

As respects schooling, Scribner and Cole contend that schooling does not appear to be a determinant of performance in tasks involving highly specialized skills. As tasks become less specifically related to either Vai or Arabic scripts, the influences of literacy on task performances became more and more remote (p.254).

As for the alleged cognitive consequences of literacy, Scribner and Cole tentatively concluded that schooling may be somewhat more important as a factor in producing some cognitive

effects than non-schooled literacy. Moreover, along with Heath (1982a), Scribner and Cole (1978) conclude that more functional analysis of literacy activities is needed particularly in education. They also call for more community analysis of what people actually do with literacy. It is important to note that Scribner and Cole do not question that there is a relationship between literacy and mental abilities. Rather, they question the assumptions about alleged general cognitive consequences which are drawn from historical studies of literacy or from specific demonstrations of abilities in a particular context. With Vygotsky (1978:34, cited by Scribner & Cole, 1978), they caution that the debate over the status of specific skills versus generally transferable, developed abilities "...cannot be dealt with by a single formula" (p.460).

Non-Cognitive Effects: Schooling as Status Attainment

If some of the so-called cognitive consequences are attributable to schooling, then success in school and level of schooling attained become the major considerations in the study of literacy. However, for many scholars there is an additional concern related to the effects of schooling. For Carter and Segura (1979), Leibowitz (1971), and Weinberg (1977) the problem is not that Chicanos and other language minorities come from "literacy-deprived" oral cultures or lack appropriate home environments to

do well in school; rather, it is that, in the process of failing to educate them, the schools become a socially sanctioned mechanism which ascribes a lower status to them. Weinberg, for example, maintains that, despite persistent efforts to educate themselves, Mexican Americans, and other minorities, have historically been victims of overt segregation and of cultural control through a variety of devices including language suppression. For example, schools denied the use of Spanish not only as a means of instruction, but even as a means of informal social communication. Citing the findings of a 1970 memorandum of the Commission on Civil Rights, Weinberg, characterizes the educational experience of Chicanos into the early nineteen seventies as demonstrating:

> (1) a high degree of segregation, (2) an extremely low academic achievement, (3) a predominance of exclusionary practices by schools, and (4) a discriminatory use of public finance. The pattern is similar to that imposed upon black children, who were regarded by the dominant white society as inferior. Denial of an equal education was a powerful instrument of continued oppression. Those who were not permitted to learn were deemed incapable of learning and could, logically, therefore be confined to a lower status in society [Weinberg, 1977:177].

Given the historical context of Chicano and other minority experience in the United States, educational under achievement by a substantial number of adults is predictable. Consequently, the

role of the schools in promoting the general rise of literacy cannot be seen in isolation from sociopolitical ideologies which seek to promote social control (Street, 1984; Illich, 1979). Moreover, Collins (1979) argues that the widespread administration of standardized tests of reading and writing have accentuated differences between groups, and have thereby reinforced social stratification.

Thus, schooling, does more than promote literacy or cognitive abilities. Erickson (1984) maintains that literacy, defined by school achievement, symbolizes the attainment of culture and civilization. It represents an elite view wherein the *literati*, well versed in the classics, knowledgeable of philosophy, the humanities, and fine arts, are held in high status. Being "literate" in this sense carries the connotation of being well "educated," and being illiterate the stigma of being "uneducated."

In a critique of this status-ascribing function of the schools, Erickson argues that literacy, meaning "being lettered," not only promotes prestige of the literate, but also promotes strategic power for them since it involves mastery of a communication system. He sees the prestige factor as masking power. It masks the distinctions between schooling and literacy such that being lettered implies that one not only has skills, but that one has been to school. Consequently, this elitist view of literacy may also be characterized

as a justification for power. Erickson goes on to raise a number of important questions:

> In current public discourse about literacy, are we talking about knowledge and skill in decoding letters, or are we talking about being "lettered" as a marker of social class status and cultural capital? Do we see the school diploma mainly as evidence of mastery of knowledge and skill in literacy? I don't think so. I think that the high school diploma functions, for low SES students, primarily as a docility certificate.... This would especially make good sense if ordinary work in most of the company's jobs does not really require literacy as schools define it [p. 527].

Like Scribner and Cole (1981 & 1978), Erickson (1984) makes a distinction between literacy and schooling and accepts their view that cognitive operations associated with literacy should be seen as "practices" within "task domains." Literacy tasks at work and in everyday life are seen as different from literacy tasks at school--each being defined by a different "social" context. School tasks are often seen as more cognitively demanding than out-of-school tasks. School tasks are often defined as "context independent" (or in Cummins' terms [1981], context reduced; see below). From this perspective, fewer cues are available from the environment to aid the learner in negotiating meaning.

Erickson argues that the notion of "literacy practices" presents a fundamentally different notion of the relations between intellectual capabilities and the social situations in which those capabilities are put to use. For example, despite their similarities, mathematical computations at the grocery store are not the same as those done "about" the grocery store "at school." Although the computation skills would appear to be the same in both cases, there is a difference in the social context in which the computation tasks are performed (p. 529). In the workbook oriented skill and drill context of most schools, the learner is not free to negotiate his or her own choices regarding the computation (p. 533). It is not just that a school computational problem is "out of context" (or we may add "in a reduced context"); rather, the problem is that it is used: "...in a context in which the power relations are such that the subject has no influence on problem formulation" (p. 533).

Erickson contends that failure in schools is related partly to a *schismogenesis* (i.e., the development of conflict which is both caused by and results from sociocultural and linguistic differences (p. 536). Erickson maintains that failure in school is "achieved" by a learner' "self-defeating" resistance to being labeled by the school as an individual of less worth than others (p. 538).

> [This] view is at once pessimistic and affirming. It proposes that children failing in school are working at achieving that failure. The view does not wash its hand of the problem at that point. It maintains, however, that intervention to break the cycle of school failure must start by locating the problem jointly in the processes of society at large and in the interactions of specific individuals [p. 539].

Given societal constraints, Erickson portrays both teacher and learner as trapped in an inflexible school culture. More supportive alternative modes of social interaction are possible (such as scaffolding), but Erickson concludes by cautioning that: "From a sociocultural point of view, literacy, reasoning, and civility as daily school practices cannot be associated and reordered apart from the fabric of society in which those practices take place" (pp. 543-544).

Erickson's article has importance in three respects: (1) He applies Scribner and Cole's notion of literacy as "practice" to schooling in modern technological societies; (2) he extends the notion of "context" by adding the dimension of "social context"; and (3) his reliance on "resistance" theory, following Giroux (1983a, 1983b), to explain failure in schools, helps to clarify an issue that usually is explained too simplistically.

Since the debate over failure in schools often degenerates either into blaming the victim (i.e., the student), or into blaming

the schools, by locating failure in a complex interrelationship of societal and educational interactions, Erickson shows that both "cognitive deficits" and "discriminatory school practices" are insufficient as hypotheses to account for failure. To strengthen his case, Erickson points to the work of Scollon and Scollon (1981) who studied the underachievement of Alaskan natives in written literacy. Scollon and Scollon found that to become literate in the terms of the Western-style school was to lose one's sense of cultural identity. Thus, the Alaskan natives' resisted school-defined literacy and suffered the consequences of only marginal performance.

Erickson's use of resistance theory to explain self-defeating failure, maintains the dignity of the individual which is often lost in class-based reproduction theory explanations (e.g., Bowles and Gintis [1976] which has been critiqued by Giroux [1983a]). In this regard, his rejection of reproduction theory parallels Labov's (1972) critique of Bernstein's "restricted code" hypothesis (see Hudson, 1980). Most importantly, Erickson's reliance on Scribner and Cole's definition of literacy as practice helps us to keep from fallaciously concluding that school-like literacy tasks are necessarily higher order thinking than non-school literacy tasks.

Similarly, Heath (1980) argues that the extent to which all normal people can become literate depends upon (1) the functions

which literacy plays, (2) the necessity of having a context or setting in which there is a need to be literate, and (3) the necessity of the presence of literate helpers in the environment. She contends that becoming literate does not necessarily require formal instruction nor a sequential hierarchy of skills which must be mastered.

Heath warns that common instructional practices impose a curriculum which slows down opportunities for actual reading experiences by fragmenting the process into skills and activities which are alien to the parents' and community's experience. Literacy instruction as a technical skill is seen to require a level of expertise which leaves parents with a sense of inadequacy and which results in their seeing little role for themselves in the process of promoting the child's literacy. Heath concludes that effective instruction needs to be presented in a more natural and functional context. She argues that, if such changes are made, a truly functional literacy instruction could "alter not only methods and goals of reading instruction, but also assessments of the accountability of schools in meeting society's needs" (p. 131).

Acknowledging that educational policies are always promoted in a socio-historical context, Castell and Luke (1983) conclude that literacy instruction has been imposed on society rather than derived from it. This distinction is an important one

since it is commonly assumed that the product of literacy is somehow distinct from the process of acquisition. Castell and Luke conclude:

> Unless the instructional process itself is educational, the product cannot be an educated individual. The context within which we acquire language significantly mediates meaning and understanding in any subsequent context of use. Our analysis has indicated that the processes and materials of literacy instruction have been based historically on ideological codes.... We argue that the wholesale importation of a literacy model imposed and not locally derived counts as cultural imperialism [p.388].

From a historical perspective, Illich (1979) has explored the use of a standardized language of literacy as means of social control (i.e., as a means of one group promoting its values of over those another). In a provocative critique of the rise of modern schooling practices as these relate to vernacular language and literacy, he argues that instructional language policies which impose a prescribed standard language for instruction diminish vernacular values associated with local common languages. He further contends that the imposition of literacy (using a state sanctioned standardized language, e.g., Castilian) restricted vernacular functions of literacy in late fifteenth and early

sixteenth century Spain. Rather than developing a tongue naturally in common with others, people would now have to receive it from above. Illich sees this change from the use of vernaculars to standardized mother tongues (by official sanction and imposition) as fostering the notion that the school is the only legitimate vehicle for promoting literacy:

> Formerly there had been no salvation outside the Church; now there would be no reading, no writing--if possible, no speaking, outside the educational sphere.... We first allow standard language to degrade ethnic, black, or hillbilly language, and then spend money to teach their counterfeits as academic subjects. Administrators and entertainers, admen and newsmen, ethnic politicians and 'radical' professionals, form powerful interest groups, each fighting for a larger slice of the language pie [p. 55].

While Illich's position is characteristically more radical than most scholars, his view that the school's choice of language and degree of standardization of that language are instruments of social control cannot be denied. With respect to Chicanos and other language minorities whose vernacular values may not be reflected in, or shared by, the majority's schools, the relevance of Illich's views should not be lost.

Recalling Heath's (1980) suggestions for literacy instruction, and the position of Castell and Luke, Illich adds an ideological dimension to the interpretation of normal schooling practices. If literacy practices are not to appear alien to

many from non-mainstream backgrounds, then educational policy formation and curriculum design must be made meaningful and functional to learners and to the community. Otherwise literacy skills in the curriculum will be seen as imposed upon the community by a schooling system whose values motives are alien to it.

In this regard, Heath (1982a) maintains that schools need to become more aware of literacy practices within the communities they serve so that these practices may be incorporated into the school curriculum. This does not preclude teaching additional skills valued by the larger society, but it does provide a link between the school and the community which imposed, standardized curriculum models are often unable to make.

PROMOTING LITERACY IN A SECOND LANGUAGE: A REVIEW AND CRITIQUE OF THE CONTEXTUAL INTERACTION THEORY

This section addresses some of the issues related to promoting second language literacy among language minorities. Its focus is on the major theoretical position currently addressing basic literacy instruction of school-age, language minority children (particularly in California which has the largest Chicano population in the nation). As will become apparent, many of the issues

raised in discussions of literacy generally reappear here in the debates over how best to promote English literacy among language minorities. There are, however, several differences. One important issue relates to the relative social status of Spanish L1, to English L2; another issue relates to the relationship between the transferability of literacy from L1 to L2. A third issue relates to the level of oral proficiency needed in L2 as a foundation for literacy in L2.

Olson (1977, 1982) has argued that so-called literate oral language proficiency is requisite for the promotion of literacy and academic success generally, and that differences in speech styles and varying degrees of metalinguistic awareness by children from different socioeconomic backgrounds affect the ease by which they become literate and adapt to formal schooling practices. This view presupposes a kind of "mis-match" between the language of the home and the language of the school. The alleged mismatch between home and school language (and textbook language) imply a qualitative, or even cognitive, limitation in the preparedness of some language minority children for basic literacy and formal education.

In this country, when the debate is extended to children who belong to language minorities, such as Chicanos, the controversy intensifies because the focus of difference is no longer

only on registers or styles within the same language. Rather, the question becomes which language system should be used to facilitate literacy and instruction--the students' home language (L1) or the language of the school (L2).

Bilingual education has been instituted, at least partly, based upon the assumption that language minority children are at an inherent disadvantage when they begin instruction in a language other than their mother tongue. While an appeal to common sense may be made as a basis for this view, there is some research evidence which, at least on the surface, appears to contradict that assumption. For example, language majority children have successfully received instruction in so-called foreign language immersion programs (Krashen, 1981).

In an attempt to address this contradiction, Cummins (1985, 1984a, 1984b, 1981; see also Cummins & Swain, 1986) has set out to explain why, and under what conditions first language instruction for initial literacy would be preferable to second language instruction. In attempting to address these issues, Cummins developed a theoretical framework which has been widely endorsed, particularly in California, and which is seen as establishing the guiding principles for the initial instruction of language minorities.

The Major Constructs in the Work of Cummins

Cummins' theoretical position grew out of his attempt to explain why immigrant children in Canada could attain conversational fluency (which he calls peer-appropriate L2 conversational skills) within two years of arrival, while their second language academic skills lagged behind native English speakers for five to seven years. Cummins argued that this discrepancy could be attributed to two dimensions of language proficiency--one related to what he calls Basic Interpersonal Communication (BIC) and the other related to Cognitive Academic Language Proficiency (CALP).

Cummins sees this dichotomy between BIC and CALP as being related to the cognitive demand or load which results from how language is contextualized. He sees BIC as being more contextualized and requiring less L2 proficiency than CALP, which he claims is less contextualized and more cognitively demanding. Since peer appropriate BIC can be achieved in only two years, the critical issue for Cummins is not merely which language to use (L1 or home language verses L2 or the majority language), but how to make students proficient in cognitive academic skills which can be transmitted through either language.

To understand Cummins' position, a fundamental assumption must be explored; i.e., the relationship of language

proficiency to literacy, or even more basic, the relationship of language proficiency to intelligence. Here, Cummins (1985:132) follows Oller & Perkins (1980:1):

> A single factor of global language proficiency seems to account for the lion's share of variance in a wide variety of educational tests including nonverbal and verbal IQ measures, achievement batteries, and even personality inventories and affective measures.... The results to date are preponderantly in favor of the assumption that language skill pervades every area of the school curriculum even more strongly than was ever thought by curriculum writers or testers.

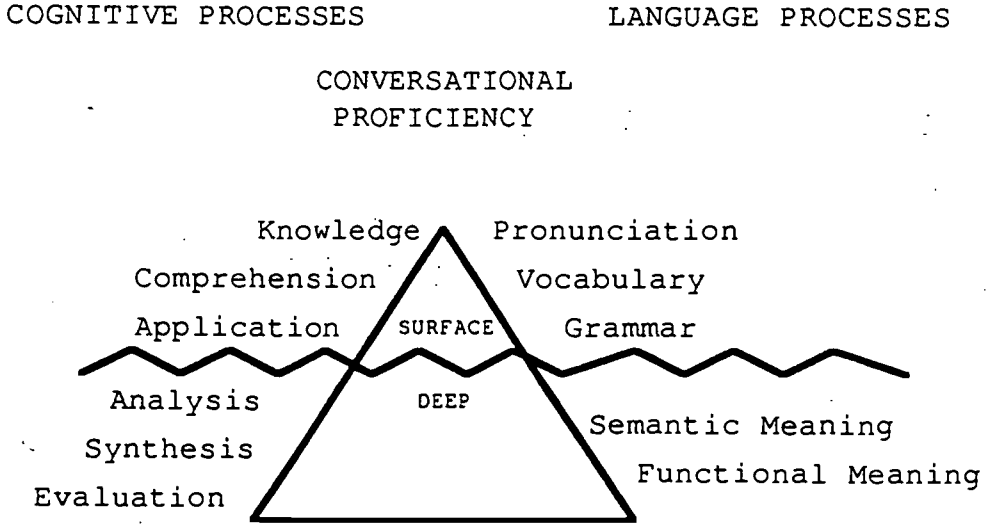
Although he agrees with Oller, that language proficiency is global, Cummins goes on to make a distinction between those aspects of language which are clearly related to school success and those which are not:

> [A]cademic and cognitive variables are strongly related to at least some measures of all four general language skills [listening, speaking, reading, and writing]...; however, it seems apparent that not all aspects of language proficiency are cognitive/academic in nature. For example, in a first language context, 'conversational' aspects of proficiency (e.g. phonology and fluency) are clearly unrelated to academic and cognitive performance [Cummins, 1985:132].

Cummins argues that language proficiency can be conceptualized as a kind of iceberg. At the tip of the iceberg are those aspects of language which Cummins sees as less related to academic success, while at the bottom of the iceberg are those aspects which are more heavily related to academic success.

FIGURE 2-1

CUMMINS' ICEBERG
OF SURFACE AND DEEP LEVELS OF
LANGUAGE PROFICIENCY

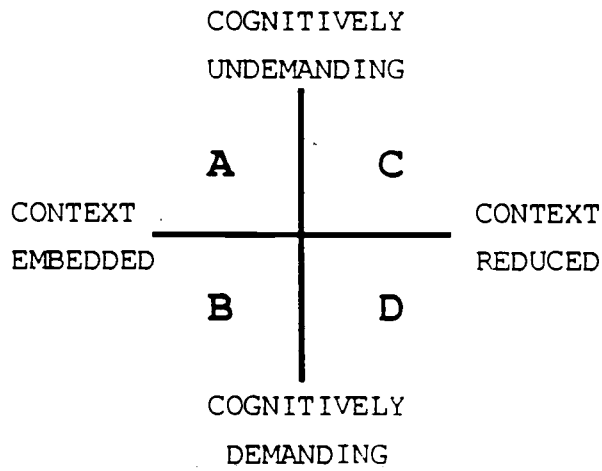


* Adapted from Cummins (1985:138)

Cummins next ties his notion of levels of proficiency to degrees of difficulty. Communication is conceptualized along two continuums: (1) cognitive demand, and (2) contextual support.

FIGURE 2-2

CUMMINS' QUADRANT
RANGE OF CONTEXTUAL SUPPORT
DEGREE OF COGNITIVE INVOLVEMENT



Adapted from Cummins (1985:139)

According to Cummins, the "A" quadrant represents communication which is facilitated by the opportunity to negotiate meaning and the ability to get feedback and cues, whereas "D"

quadrant communication is supported only by means of linguistic cues to meaning. It is apparent that Cummins would place reading and writing and other "academic" tasks in the "D" quadrant, since he accepts Olson's (1977) distinction between utterance and text and Bruner's (1975) distinction between communicative and analytic competence as well as Bereiter and Scardamelia's (1981) distinction between conversation and composition. His notion of "context embedded/context reduced," he credits mostly to Donaldson's (1978) distinction between "embedded" and "disembedded" thought (Cummins, 1985:139-141).

Cummins maintains that the construct, context/cognitive demand, helps to explain why second language students acquire interpersonal communication skills more quickly than peer appropriate academic skills. When English as a Second Language (ESL) instruction is more context embedded, as in programs using communicative approaches, Cummins argues that conversational language is rapidly acquired. On the other hand, because the major purpose of schooling is to develop students' abilities to interpret and manipulate text, this more cognitively demanding task requires a deeper language proficiency.

An interesting component of Cummins' argument is the notion of a "common underlying proficiency" which is developed through a language, but the effects of which are not specific to it.

Thus, its effects may be transferred when instruction is later mediated by another language. Cummins states:

> In concrete terms what this principle means is that in a Spanish-English bilingual programme, Spanish instruction that develops first language reading skills for Spanish-speaking students is not just developing Spanish skills, it is also developing a deeper conceptual and linguistic proficiency that is strongly related to the development of English literacy and general academic skills [Cummins, 1985:143].

Cummins next draws upon the metaphor of a dual tipped single ice-berg. The peaks represent surface features of proficiency in two languages, and the singular base represents the common underlying academic proficiency.

Cummins' notion of common underlying proficiency is supported by several researchers (e.g., Swain & Lapkin, 1981, cited in Office of Bilingual Education 1982:3). In Canadian "immersion" programs monolingual English-speaking children were given academic instruction through French rather than English and performed as well or better in both English language development and academic achievement than their than peers who had received instruction through English.

At first glance, these findings would seemingly support the opponents of bilingual education who argue that schools should not waste students' time in L1 instruction; rather they should provide

instruction immediately in L2. Cummins, however, argues that whether instruction begins in L1 or L2 depends upon several other factors which also must be taken into account before one determines what language should be used for initial literacy. Here, his hypothesis about language acquisition is placed within a larger framework known as the "Contextual Interaction Theory."

The Contextual Interaction Theory was formulated by the Office of Bilingual Education (OBE) drawing most heavily on the work of Cummins and, to a lesser extent, on the work of Krashen and several other scholars. The theory attempts to show the relationship between student background factors and educational treatments. The basic components of the theory are illustrated below:

The model assumes a dynamic interaction between the school and the child:

> In this model, community background factors, such as language use patterns in the home and community, attitudes toward the student's home language (L1) and second language (L2), contribute to student input factors which the child brings to the educational setting. These factors, such as L1 and L2 proficiency, self-esteem, levels of academic achievement, and motivation to acquire L2 and maintain L1, are in constant interaction with instructional treatments, resulting in various cognitive and affective student outcomes [OBE, 1982:4].

According to OBE, the contextual interaction theory rests on five empirically supported hypotheses or "principles" which describe how student background factors interact with (or should determine the choice of) educational treatments to promote three goals: (1) ultimate proficiency in English; (2) academic achievement, and (3) positive psychosocial adjustment. These five principles or hypotheses are summarized as follows:

Principle 1: The extent to which the proficiencies of bilingual students are jointly developed in L1 and L2 is positively associated with academic achievement. According to this principle, there is a linguistic threshold which underlies success in school. Success is more likely when the home language is maintained and the school language is developed. When this is not done, there are negative effects: "Subtractive bilingualism, i.e., not maintaining the home language and not developing the school language results in students being 'limited bilinguals,' and this correlates with difficulties in attaining initial literacy (OBE, 1982:5-7).

Principle 2: Language proficiency involves two dimensions: the ability to communicate in basic interactive tasks, and the ability to use language in literacy/academic tasks. This principle is based upon Cummins' (via Donaldson's) construct of context/cognitive demand. Academic programs must develop both dimensions of language to ensure academic success (OBE, 1982:7-9).

Principle 3: Developing the L1 skills of language minority students in academic tasks provides the basis for the development of similar proficiencies in L2. Following Cummins' notion of common underlying proficiency, it is assumed that literacy training in L1 provides a basis for, and later transfers to L2 (OBE 1982:9-12).

Principle 4: The acquisition of basic communication skills in L2 is facilitated by the provision of "comprehensible input" and a supportive affective environment.

Here the theory draws largely on the work of Krashen (1981). The assumption is that "basic" (cognitively undemanding) second language skills must be developed first before "academic" proficiencies are developed. Consequently, "input" cannot be too cognitively demanding, and the learning environment must be supportive of the student (OBE, 1982:12-15).

Principle 5: Interactions between students and teachers and among the students themselves are affected by how the students' status is perceived. Following research on the role of self-perception, teacher perception, and teacher affect on academic achievement, the theory maintains that students themselves and their teachers must have a positive perception of the students in order to promote academic success. Using the student's L1 for initial instruction is seen to have positive psychosocial benefits as

well as those positive cognitive benefits described above (OBE, 1982:15-18).

The Significance of the Contextual Interaction Theory

The contextual interaction theory has provided a useful framework for bilingual education. Prior to the articulation of the theory, embattled advocates of bilingual education were hard pressed to defend it when the research appeared to show that cognitive academic language proficiencies in L2 could be developed by bypassing basic literacy instruction in L1. The theory has helped to explain under what conditions the maintenance of L1 is desirable and why initial literacy instruction in L1 actually facilitates academic success in L2. Its additional strengths are that it takes into account the relative status of L1 to L2 (in the community surrounding the school) and that it sees language as being related to the child's sense of self-concept.

From a political standpoint, the theory's simplicity (five principles and comprehensible charts) has added a sense of legitimacy to the arguments of proponents of bilingual education. However, aspects of the theory, particularly those based upon the work of Cummins, have not been without their critics. What is perhaps even more interesting is that some of Cummins' strongest critics are found among those who also advocate bilingual education.

Critiques of Cummins' Position

Since its endorsement by the State of California, Cummins' work has not only enjoyed a wide following (with practitioners freely using his terminology in their daily jargon), but it has also been critiqued and attacked. His work became the focus of an acrimonious exchange of articles (Cummins, 1983; Edelsky, Hudelson, Flores, Barkin, Altweger, & Kristina, 1983), and is the subject of a scholarly debate (Rivera, 1984).

The most severe attack has come from Edelsky *et al.* (1983). Although Edelsky *et al.* credit Cummins' theory as being "sophisticated, appealing, well-argued," and "unquestioningly well-intentioned," they believe "It is wrong in a basic premise concerning literacy and wrong in relying primarily on data from tests and test settings" (p. 1).

A careful reading of Edelsky *et al.*'s critique indicates a deep rooted philosophical dispute between those advocating ethnographic approaches to assessing literacy and those, like Cummins, who rely on psychometric/positivist approaches wherein definitions of achievement are operationalized, tested, normed, etc. Consequently, Cummins is attacked by Edelsky *et al.* for his choice of data and his choice of criteria for determining school success:

> [O]nce one accepts the equivalences reading test = reading and exercises-with-artificial-texts = proper

> literacy instruction, then it becomes necessary to explain failure on the tests and exercises by blaming the learner, the teacher, the language of instruction, anything but examining the validity of how literacy (or language proficiency or learning) was conceptualized in the first place [p. 4].

Edelsky *et al.* further charge that Cummins' notion of cognitive aspects of language is "in fact the ability to produce or match printed synonyms or vocabulary items"; and "native-like competence in a language was not defined as fluency but as scores on tests of vocabulary and synonyms" (p. 5-6). Moreover, what Cummins calls Cognitive Academic Language Proficiency (CALP) is seen as merely being "test-wiseness" (p. 6). Edelsky *et al.* note that tests utilize linguistic texts which may not be representative of other kinds of texts (presumably which might be more familiar to the test taker) (p. 6). CALP's relationship to school success is called "tautological," since the definition of school success is cognitive academic language proficiency and the definition of CALP is the ability to do well on school tests. In Edelsky's view this is nothing more than the ability to do out-of-context, "irrelevant nonsense" (pp. 8-9). Furthermore the distinction between basic interpersonal communication (BIC) and CALP is seen as "absurd," since logic and metaphor and other "abstract" aspects of communication occur in face-to-face communication as well as in written communication.

Edelsky *et al.* are also quick to criticize Cummins for his attempt to explain "semilingualism" (undeveloped proficiency) as a result of the child's inability to perform well on academic tests. They charge that Cummins sees semilingualism:

> Not as being a strictly linguistic concept at all, but a concept pertaining to cognitive aspects of the language, understanding of the meanings of abstract concepts, synonyms, etc., as well as vocabulary. This is also a description of cognitive academic language. In other words, low proficiency in academic language is not due to semilingualism; it is semilingualism--another tautology [p. 10].

Edelsky *et al.* prefer to interpret what Cummins' calls *semi-lingualism* not as cognitive/language deficits, but as language differences insofar as language minority children do not possess the standard (power) dialect (p. 11). Their low performance on tests is not seen as significant since "Proficiency with meaningless, non-functional (usually written language use in school or test settings) appears to be unevenly distributed among school children" (p. 10).

Cummins' (1983) reply to these criticisms is equally strident. His primary defense rests mostly on the suggestion that Edelsky *et al.* cannot read well and subsequently have "projected" their worst fears into his text. He counters that his BIC/CALP

distinction has provided a basis to critique the misuse of standardized tests in the assessment of language minorities. He also argues that the notion *semilingualism* is as much an outgrowth of the ethnographic tradition as the positivist tradition. Lastly, he criticizes Edelsky *et al.* for being too quick to criticize standardized measures since these include miscue analyses and Cloze tests which they would probably regard as "authentic" devices.

However, Edelsky *et al.* were not the only scholars to criticize Cummins. Several other prominent scholars have also expressed similar concerns. For example, Troike (1984) shares Edelsky *et al.*'s concern over Cummins' reliance on test data:

> The general [language-mediated] cognitive-intellectual ability which he posits may be largely an artifact of test results that actually reflect acculturation approximations to middle-class Western cultural norms and behaviors. If we are to avoid reifying tautologies, we must be cautious about prematurely moving to draw conclusions or formulate models on the basis of inadequate and incompletely understood data [p. 51].

Perhaps the most interesting area of debate between Cummins and his critics relates to his constructs, BIC and CALP, and to the constructs of "context" and "cognitive demand" which underlie them. In this regard, it is interesting to note that in his

writings (1985, 1984) following the Edelsky *et al.* (1983) attack, Cummins became reluctant to use the labels BIC and CALP, claiming that these had become subject to "misinterpretation" (yet his framework which generates these constructs remains very much unchanged in his most recent work). Spolsky (1984) warns that, by using such terms, Cummins runs the risk of falling into the same trap as Bernstein by applying "value laden labels."

Unfortunately, merely abandoning the labels of BIC and CALP still does not remove the basic problem which results from Cummins' notion of context reduced/embedded communication. Wald (1984) echoes concerns raised by Leacock (1972) that distinctions between "concrete" and "abstract" communication or between "context embedded" and "context reduced" communication may generate more confusion than clarity.

Attempts to operationalize Cummins' quadrant into terms familiar to teachers are problematic. As Spolsky (1984) has suggested, the terms and examples chosen to operationalize Cummins' constructs are value laden with the concrete versus abstract dichotomy which echoes the notion of alleged cognitive consequences position of the "great-divide" theorists. From Wald's (1984) and Leacock's (1972) perspective, the categorization is confused and inaccurate. Oral interactions can be as much or more cognitively demanding than written communication (depending on the "context").

Thus, it appears that Cummins' notion of context does reflect the views held by Goody and Watt (1963) and Ong (1982) and implies that oral communication is inherently less demanding than written communication. Similar to the criticisms made of the "great-divide's" tendency toward reductionism, Wald (1984) argues:

> Cummins' theoretical framework goes a long way in imposing order on the multiplicity of observations and proposals concerning the relation of language proficiency to academic achievement.... However, unless some of the basic concepts...are refined for further clarity and informed by specific socio-cultural settings,...the framework will remain an academic abstraction incapable of making contact between the language resources developing among the students independently of academic contexts and the development of literacy skills necessary for academic achievement [p. 68].

One final area of concern is related to Cummins' approach to assessment. Cummins' focus on "readiness" presupposes a threshold of basic proficiencies which must first be mastered before the child is capable of dealing with more demanding tasks. It may well be that Cummins' approach is too limited since assessment appears to involve only measures of actual development levels as determined by autonomous tasks. Vygotsky (1978) has cautioned that merely assessing a child's level of ability does not indicate a child's potential for further growth.

An Alternative View: Edelsky's Counter Hypotheses

It is important to note that Cummins' detractors do not stop short of offering their own alternative "hypotheses" or conclusions on how language minority children might better develop initial literacy. The following summarizes those proposed by Edelsky *et al.* (1983):

1. If one has to learn nonsensical skills, it is better to use a language which the child already knows.

2. Language instruction needs to be purposeful and to contain "messageful content."

3. The goal of instruction should not be improved test performance by children who are "literate imposters"; i.e., those who can perform meaningless manipulations of surface structure.

4. Oral communicative competence provides the basis for literacy. Consequently, the school and community should accept the child's entry abilities as a legitimate foundation for future learning.

5. Interpersonal uses of language (oral and written) should become more a focus in the school to foster authentic literacy development.

6. It is possible to become truly literate first, before learning school literacy.

The assumption which underlies these hypotheses is that much of what is called literacy in schools is artificial and unauthentic. Edelsky *et al.* would argue that much of what

Cummins has called CALP, or more recently "context reduced/cognitively demanding" language proficiencies, are, in fact, not higher order cognitive abilities, but class-based, meaningless activities performed in middle class schools. To the extent this is true, then, literacy should not be equated only with schooling and so-called school literacy activities should be given greater scrutiny.

However, some qualification is necessary here. Whereas it is dangerous blindly to equate performance on school-tests with literacy, it would be pointless to argue that all school-based activities are meaningless, and that none involve higher order abilities, or that increased levels of schooling are not without benefits (especially social and economic) to the learner. Schools, after all, are the primary instruments of promoting literacy in most modern societies.

Relevance of the Debate Over the Contextual Interaction Theory for Adults

Much of the available research on language and literacy acquisition has focused on school-age children and to some extent on adolescents. This is in part due to the greater access to children and adolescents as research subjects. Whereas it is likely that many of the issues related to child L2 language and literacy

acquisition are of relevance to adults, much more research and theoretical work is necessary on adults--especially on those who are middle-age or older. There is, for example, no equivalent theoretical framework to the Contextual Interaction Theory which has been formulated based upon adult research. The Contextual Interaction Theory is grounded in empirical studies of school-age children. While much of the literature related to the relationship among children of L1 literacy to L2 literacy, or of L2 oral skills to L2 literacy *may* have relevance, other factors such as those related to age, motivation and adult socialization need much more study.

While there have been a number of important studies dealing with foreign-born ESL students at universities, there is a much smaller body of literature on the acquisition of language and literacy by Chicanos and other adult language minorities in non-college environments.[4] Unfortunately, most of the studies on young adult college students are focused on individuals who were already literate (and often well educated) in L1.

One notable exception is a study by Weinstein (1984) on Hmong women receiving literacy instruction for the first time in

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[4] There are very extensive ESL/EFL, and applied linguistics literatures of general relevance to literacy instruction/ development for Chicanos and language minorities, and for those becoming literate in foreign languages. To cite just a few examples, see Dubin, Eskey, and Grabe (eds.) (1986), Alderson and Urquhart (eds.) (1984), Krashen (1984), Hudelston (ed.) (1981), Mackay, *et al.* (eds.) (1979), Widdowson (1979), Rigg (1977), Been (1975), Davies and Widdowson (1974).

English, their L2, rather than in Hmong. Weinstein notes that school-based instruction which does not take into account social functions and social needs in L1 and in the native culture is bound to fail. Thus, her conclusions regarding adult Hmong women acquiring literacy tend to parallel the conclusions of Heath (1986, 1984, 1982a, 1980), Erickson (1984), and Scollon and Scollon (1981).

Hatch (1983) in a review of the literature related to the relationship between age and second language learning cites only one study where some of the subjects were middle-aged. Most studies of "older" learners are based upon subjects in their teens. Thus, the role of age, and the aging processes relative to second language learning, is unclear. It is known that aging seems to have some relationship to language loss. However, its relationship to ability and motivation (within the contexts of normal adult life) to learning a second language and literacy (in a first or second language) are unclear.

One study, Perdue (1984), does appear to provide some clues regarding motivation of adults to learn and use a second language (second language is used broadly here to include oral and written language). In a major study of immigrant second language acquisition, Perdue found that adults, particularly those of lower SES, were often discouraged from attempting to use a

second language they were trying to learn because of intolerant language expectations of the majority. Perdue maintains that many of the majority not only expect immigrants and language minorities to use the language of the majority, but to use it as well as a native speaker would. The inability to do so reinforces the language prejudice of (many among) the majority while stigmatizing the non-native-speaker. Not wishing to be stigmatized, the non-native-speaker avoids situations where he or she might feel less than competent and, thereby, lose the opportunity to use what has been learned, practice, or experiment with L2. Unlike the child, the adult is generally expected to perform "like an adult;" i.e., as one who has competence in the language and literacy processes of the adult world. Those who lack proficiency in either are often not treated kindly.

While there is a growing body of information on the socio-historical,[5] linguistic and sociolinguistic,[6] and educational[7]

[5] For a concise historical overview of Chicanos as an ethnic group, see Cortés (1980). Banks (1984:274-280), in addition to providing a useful guide from the perspective of ethnic studies, also provides a partially annotated bibliography of historical, sociological, and general works on Chicanos.

[6] Among the growing number of authors who address various aspects of Chicano education are Carter and Segura (1979). They explore the history of Chicano schooling in the United States and a number of issues related to educational sociological conerns. Weinberg (1977) has an important chapter which deals with discrimination against Chicanos in education and with Chicano efforts to promote their own education. Leibowitz (1971) explores the history of educational language policies directed at Chicanos and other language minority groups in the United States. Ogbu and Matute-Bianchi (1986) have recently explored sociocultural factors among Chicanos, and among several other groups, as these affect schooling (see pp. 111-133). Heath (1986) has briefly addressed Chicano children from the perspective of sociocultural factors in language development (see pp. 160-164). Carrasco (1981) provides an ethnographic study of a Chicano bilingual classroom. Prigoff (1984) provides a study of self-esteem and school stress among barrio Chicano youth.

[7] Among those works of specific relevance to Chicano linguistics are: Macías (1985) who profiles the language characteristics of the Mexican origin population in the United States; Macías and Spencer (1984) who compare various studies estimating the number limited English proficient persons in the United States; Sánchez (1983) who provides a concise introduction to Chicano sociolinguistics and history; Peñalosa (1980) also provides a useful introduction; Macías (1979) addresses the issue of choice as a basic human right; Hernández-Chávez, *et al.* (eds.) (1975) explores regional and social language variation among Chicanos. See also

experience of Chicanos, until recently, data addressing Chicano literacy has been embedded within several bodies of literature.[8]

This section briefly reviews relevant literature related to the extent of Chicano/Latino literacy based upon national surveys. Next is a general discussion of literature relevant to Chicano/language minority children becoming literate in a second language.

The Extent of Chicano/Latino Literacy

Many of the national surveys of literacy in the United States fail to make distinctions among major ethnic groups. Thus, the attempt to determine the extent of Chicano literacy (and that of other groups) often requires the need to extrapolate, and to make inferences, from data related to "Hispanics." Generally, even when data on Chicanos is available, it is embedded within the larger Latino ("Hispanic") literature.[9] Since Chicanos are a subgroup

Sánchez (1976), and Peñalosa (1975).

[8] In addition, to the extensive ESL literature which is of general relevance to Chicanos, there are many works related to reading, writing, and literacy instruction/development and the psycholinguistics of reading, which are also very pertinent. To cite only a few, there are Smith (1983, 1982, 1975, 1973), and the work of K. Goodman (1970, 1969, 1967), K. and Y. Goodman (1983), Y. Goodman and Burke (1980), Harste, Burke, and Woodward (1984), Harste and Burke (1980), Kucer (1986), and Wells (1986, 1985).

[9] One noteworthy exception is the recent Latino subgroup analysis by Macías (forthcoming) of the 1980 Census and the 1976 Survey of Income and Education (SIE). See also Macías (1982).

among the Latino population, it is understandable that data related to Chicanos is embedded in this manner; Chicanos are the largest language minority group and account for about 61% of the Latino population of the United States (Banks, 1984). Thus, inferences about Chicanos from Latino data, or even from language minority data, have some merit, but must be used with caution given the very different profiles of the various subgroups (Macías, 1986). However, since each language minority subgroup can be expected to have a unique sociohistorical and sociolinguistic experience, more group-specific data is desirable whenever it is available.

A growing number of national data sets allow for extrapolation of Chicano literacy estimates or rough inferences via "Hispanic" data. Among these data sets are the 1985 Young Adult Literacy Survey, the 1982 English Language Proficiency Survey (ELPS), the 1980 Census, the 1979 National Chicano Survey (NCS), the 1976 Survey of Income and Education (SIE), the Adult Performance Level (APL) (which began in 1971 and was first reported on in 1975), and various Current Population Survey (CPS) reports on educational attainment in the United States.

Orum (1982) notes that, based upon the 1979 CPS report, Chicanos had the highest rate of functional (English) illiteracy among all Latinos-- for Chicanos the rate was 23.1% compared to 15% for Puerto Ricans, 9.3% for Cubans, and about 6% for all other Latinos. She also notes that, using competency-based APL criteria, 56% of all Latinos in the United States were found to be

functionally illiterate compared to 47% for Blacks, and 16% for Anglos.

However, Venezky, Kaestle, and Sum (1987), found that based upon the results of the Young adult literacy survey, Latinos between the ages of 18 and 25 generally achieved higher scores than Blacks, but lower scores than Anglos, on four measures of literacy: NAEP reading, Prose reading, Document reading, and Quantitative reading. There are several possible explanations for differences in the findings relative to literacy among Blacks versus Latinos in the APL and Young Adult Literacy Survey. First, the nature of the tests were different--thereby yielding different results (the Young Adult Literacy Survey relied more upon simulated literacy tasks). Another explanation is that the times of administration were far enough apart that the characteristics sampled had changed sufficiently to produce different results (the APL was conducted more than ten years earlier). Still another possibility is the lack of symmetry in age structures of the samples; the APL was focused on a representative sample of all adults, while the Young Adult Literacy Survey was limited only to those 21 to 25 years of age.

Though its sample was limited to younger adults, and though the study was limited to an analysis only of English literacy, the Young Adult Literacy survey does provide some useful

data. Ortiz (1987) has undertaken a secondary analysis of the survey focusing on Latinos specifically. Her findings indicate that Chicanos tended to achieve higher rates of English literacy than Puerto Ricans on the four measures (i.e., NAEP reading, Prose reading, Document reading, and Quantitative reading) and on a composite literacy measure derived from the four. Unfortunately, she did not extend her subgroup comparison to other Latino subgroups (possibly because the sample size may not have been large enough for such comparisons).

Ortiz also compared Latinos, Anglos, and Blacks relative to the relationship between four major clusters of background factors and English literacy. These factors were related to socioeconomic background, reading practices, educational achievement, and language. Ortiz concluded that the lower levels of English literacy among Latinos were related to the generally lower socioeconomic status of Latinos, and were even more strongly related to language background:

> These results suggest that the main criteria for developing English literacy is generally exposure to English.... Spanish ability/use was found not to affect English literacy. Thus, policies regarding acquiring English literacy should be concerned, less with diminishing the role of Spanish, and more with providing exposure to English [p. 23].

Unfortunately, Ortiz does not explain what "exposure to English" would entail. If, for example, by "exposure" she means exposure to *oral* English in educational programs, then her prescription seems to contradict the conclusions of Orum (1982) Cummins (1985, 1984a, 1981), and Wells (1986), all of whom argue that an over emphasis on L2 oral language development (as a prerequisite) can have a negative impact on L2 literacy. Orum has noted:

> Educational programs which focus only on producing children who speak English do not promote full English proficiency and may, in part, be responsible for the high rates of functional illiteracy in the Hispanic community [1982:5].

There appears to be a need for Ortiz's prescription regarding "exposure to English" to be clarified and elaborated.

On the positive side, Ortiz indicates that there is almost no English "illiteracy" among Latino young adults. However, since the findings indicate lower achievement for Latinos than for Anglos, she attempts to determine the reasons for this.

> Despite controlling for numerous factors...considerable differences between Hispanics and Whites were still evident. What reasons might there be for these differences remaining? The analysis held constant many of the factors that distinguish the experience of Hispanics in the U.S., however, it could not take into

> account *all* the factors that make this experience unique and explain lower literacy levels [pp. 23-24].

Ortiz speculates that these factors might include aspects of socioeconomic status not captured in her study, a poorer education than the majority generally receives, and/or a "minority stigma" attached to being "Hispanic" or a "Hispanic immigrant." Unfortunately, she does not provide any elaboration on these possible "causes" or correlates of lower English literacy.

Again, while the analysis of the APL, NAEP, and Young Adult Literacy surveys are useful in providing some data relative to Latino English literacy, one weaknesses is that they fail to adequately probe literacy in Spanish (and in other languages). Thus, researchers are left only to speculate about the salience of non-English language background factors without exploring the relationship of L1 literacy to L2 literacy.

The Acquisition of English Literacy in Schools by Chicanos/Language Minorities

In addition to national literacy survey data, there are other bodies of literature of relevance to Chicano literacy from the perspective of instruction. For example, there is a relatively extensive literature related to reading, writing, and literacy in bilingual programs. While much of this literature addresses issues

which are of relevance to Chicanos, it is not always very ethnic specific in its focus, conclusions, or prescriptions. Whereas much of the literature on bilingual education, reading and writing for bilingual or "Hispanic" children is based upon research of Chicano children (or based upon studies of Chicano and other language minority groups), frequently subgroup identification is given only parenthetical, if any, explicit reference or discussion. Thus, much of the discussion is embedded within the literature which addresses "Hispanics," the "Spanish-speaking," and, more generally, "language minorities."

However, a number of works appeared in the 1980s which explicitly focused on various aspects of Chicano literacy. The focus of these works range from those addressing reading skills assessment (e.g., Hoffer, 1983), to language influences on writing (Cronnell, 1985, Penfield, 1984, 1982), to instructional focuses (Miller, 1985), to ethnographic studies of the functions and values of literacy among Chicanos (Trueba, 1984; Valadez, 1981).

While it is distressing that more studies of literacy and schooling in the United States have not been more explicit in their discussions of Chicano ethnic, language, and cultural factors (especially since Chicanos are the largest group among the Latino population), much of the literature is still relevant to the study of Chicano literacy.

What Factors Need to be Considered in Literacy Instruction Among Chicano/Latino Bilingual Children?

Not all Chicano children are bilingual. However, the majority in the United States are raised in bilingual environments. For many Chicanos (and members of other language minority groups), it is commonly assumed by the schools that children enter school with considerable linguistic deficits which make learning and the acquisition of L2 literacy difficult. In a major review of the literature related to reading in bilingual programs, Fillmore (1986) notes that research findings are mixed on the extent to which various language proficiencies affect L2 reading.

For example, Fillmore (1986), in a major review of the bilingual reading literate, notes that some studies indicate that L2 reading difficulties may be due to an inadequate development of L2 oral language; others indicate that L2 learners may have difficulty learning to speak and read in L2 simultaneously while L1 readers can study L2 oral language and learn to read as a separate task. She also notes that bilingual children have been able to score ultimately higher in L2 achievement tests if they had learned to read in L1 first. These findings tend to support the hypotheses of Cummins (1985, 1984a, 1981; see above).

However, several authorities would qualify or take issue with these claims. Goodman, Goodman, and Flores (1979) contend that, while it is easier to become literate in a second language once one has developed literacy in any language, one need not have both a highly developed oral productive and receptive ability in the second language to become literate in a second language. Rather, they argue that it is the receptive skills which are more essential.

Edelsky (1986) makes a similar claim for children's writing. She maintains that transferability of writing skills is not constant across contexts; they vary with the context. This suggests, at least in the case of writing, that skills are not transferable based upon a common underlying proficiency, but are situation specific as Scribner and Cole (1981, 1978) have contended. Furthermore, she contends that students learning to write in English and Spanish were able to keep the two languages separate without one "interfering" with the other. Moreover, Edelsky argues that a rigid sequence (e.g., first learning the oral second language before learning L2 reading and writing) does not have to be adhered to in any strict sequence, expect, perhaps, for the wholly monolingual child.

The notion of an L2 oral language "threshold" has been explored as it relates to reading by Clarke (1980). Clarke

maintains that inadequate L2 oral abilities cause proficient L1 readers to "short-circuit" in L2 reading if their L2 oral proficiency is inadequate. Similarly, Matluck and Trunmer (1979) concluded that there is an L2 oral threshold level of at least grade one (monolingual level) for second language learners in grades three to six, which is necessary to predict L2 reading success.

However, Hudson (1980) argues that more than just oral proficiency is necessary in L2 to prevent a "short-circuit" in the L2 reading process. He indicates that, while some threshold level of oral proficiency is important in determining the ability to read in L2, there may be another factor which can cause a "short circuit," i.e., schema or background knowledge. This factor has been noted by a number of scholars (e.g., Mace-Matluck, 1982; Andersson & Barnitz, 1984). Other researchers have noted the importance of discourse narrative structures, for example, Durán (1985), who discusses the role of story structures as one of the earliest modes of discourse acquired by children.[10]

In addition to these factors, Thonis (1981) suggests that other factors need to be taken into consideration in order to

10 To the extent that story structures may be culturally influenced, as Heath (1982a) has maintained, and to the extent that rhetorical models and corresponding styles of thought vary across cultures as Kaplan (1986, 1966) contends, the role of schema differences needs to be considered for both L2 reading and writing instruction.

predict literacy skills in second languages. Among the linguistic factors are the similarity between the language systems and between the writing systems. Among the non-linguistic factors are home and community attitudes toward reading, and individual factors such as attention and persistence.

Recent works have appeared which address the implications of language varieties and functions of literacy for Chicano literacy development and literacy instruction (e.g., Penfield, 1984, 1982; Trueba, 1984). Valadez (1981) has addressed both issues related to writing. She maintains that, before effective literacy instruction can be planned for Chicano and other Latino students, it is necessary to understand the significance of literacy for members of these groups outside of the classroom. In order to motivate students to write in an alien environment (i.e., the classroom), it may be necessary (at least initially) to allow students to write in the language or dialect in which they are the most comfortable. For Valadez, the student's motivation to write must be nurtured before emphasis is placed on rules of form.

> Once the students have the motivation to write, the language arts teacher, or the literary critic, might suggest rules of rhetoric which can enhance the message the student wishes to convey. This paper is written from the speculative position that the benefits which accrue to those who discover that they can write, who feel the power that the written word gives, [as

> Paulo Freire teaches, and as our graffiti writers express], will improve academic achievement in the language arts and in other areas of the school curriculum [Valadez, 1981:177].

Valadez, drawing on the work of Freire (1970b), contends that literacy generally, and writing specifically, "empowers" students by breaking the "culture of silence."

Promoting Literacy Among Chicano/Latino Adults

While recognized literacy authorities (e.g., Hunter & Harman, 1979) have noted that many of the non-English literate are from language minority groups generally (and are from the Latino population specifically), neither in their descriptions, nor in their prescriptions, are the special needs of members of these groups described in any detail. For example, Fingeret, (1984) reviews about 150 sources on adult literacy, none of which deal specifically with Chicanos, Latinos, or other language minorities. Moreover, while Project PLUS (Promote Literacy in the U.S., a joint effort of the Public Broadcasting Service and the American Broadcasting Company during 1985-1986) has increased public awareness of the problem of adult illiteracy, it has directed little attention toward the special needs of language minorities. While literacy campaigns (and attempts to raise public awareness) are important, there is a greater need to expand literacy educational

resources and to make those in place more responsive to the needs of Chicanos, Latinos and other language minority groups.

Since there are a number of major programs available to promote literacy in the United States, the question arises as to why these programs may not be entirely appropriate or sufficient. Below, several of the major adult programs are reviewed in an effort to address this question.

Library literacy programs and private volunteer efforts are often seen as resources which can adequately address the "literacy crisis." However, Vargas (1986) notes that in California (which has the largest literacy effort, and the largest number of Latinos), many Latinos are turned away. They are referred to adult basic education ESL programs because their oral English skills are seen as inadequate to participate in the library-based programs. For example, in 1985, 16% of the applicants to the Los Angeles library literacy program were referred to ESL programs. Moreover, the program served only 179 people of which only 35% were Latino.

Vargas also contends private programs such as Literacy Volunteers of America and Laubach Literacy, Inc., have, often failed to serve Latinos and other language minorities because English oral skills are seen as requisite. Moreover, volunteer programs typically lack adequately trained staff in the areas of greatest need (i.e., in those areas with larger concentrations of lower-income Latinos).

Thus, Adult Basic Education (ABE) programs typically become the principal vehicle for providing literacy instruction to Chicano and Latino adults. According to Hunter and Harman (1979), approximately three fourths of those in Adult Basic Education (ABE) programs were studying ESL at the end of the 1970s. Unfortunately, a fundamental ambiguity underlies the curriculum of ABE programs, since their mission is not always entirely clear--they are in part English oral *language* programs, in part *competency based education* programs, and in part English *literacy* programs. The distinction between these labels often is not clearly drawn. Moreover, much like their historical ancestors, the programs of the "Americanization Movement" (Cook, 1977), adult basic education ESL programs are not generally specifically designed to meet the needs of different ethnic groups; rather, one program serves all.

While there are many fine ABE programs, assessment in programs vary. Some programs allow for self-selection by level of ESL, whereas others have placement tests (generally written). Consequently, it is not uncommon to find students from a variety of L1 literacy, language, education, and ethnic backgrounds all enrolled in the same class. There are frequently no uniform standards for class-size (100 students to one teacher is not unheard of) nor is there a clear differentiation between the oral

language curriculum and the literacy curriculum, nor is there any attempt to determine L1 literacy. Many programs operate on a "space available" basis. Long waiting lists are common, and needs assessment for literacy needs of the target student populations is rarely done (Wiley, Wrigley, & Burr, 1983).

In addition to adult schools, community colleges provide another avenue for literacy instruction. However, Vargas (1986) notes that the community college cannot always adequately address the needs of Latinos:

> A needs assessment of adult English literacy classes in regions with large concentrations of Hispanics, conducted by the League of United Latin American Citizens [LULAC], found that ESL classes at community colleges generally fill up quickly and have long waiting lines. The LULAC survey also found that some community colleges have residency requirements that prohibit individuals who have not resided in the area for a set period of time from enrolling. Fees and tuition are additional barriers to ESL classes for low-income people . . . and parents with small children . . . . [p.18].

Vargas (1986) notes that few other adult literacy federal programs have been designed specifically for Latinos. He argues that while there are programs such as those funded under the Education Act, and Job Training Partnership Act (JTPA), these programs have had minimal impact on Latinos since none have

been designed specifically for Latinos.

However, the one possible exception is the Bilingual Vocational Education program which provides funds to various educational agencies at the state, local, and postsecondary level. Vargas (1986) notes: "These programs benefit limited-English proficient individuals by providing program support and training for bilingual vocational instructors" (p. 17). Unfortunately, the programs for Federal Fiscal Year 1986-1987 reached less than 2,000 individuals nationally through only 19 projects. Meanwhile, nearly half a million Latinos were enrolled in Education Act programs at the beginning level; thus, the Bilingual Vocational Education programs are very small in comparison to the mainstream programs which are not specifically designed to meet the needs of Latino groups. Vargas notes:

> The Bilingual Vocational Training program is...too small. This program has always been funded at minimal levels; the program was cut from $4.8 million in FY 1980 to $3.6 million in FY 1986 and has often been proposed for elimination. In FY 1986 only 1,736 students will receive training, and less than half of these will be Hispanic [p. 18].

Crandall (1979) has also discussed the role of vocational ESL programs (VESL), in providing literacy training for adults. While these programs appear to provide promise (since literacy

instruction is tied to improving the learner's employability), she notes that the learner's needs and choices must be incorporated in the design of the curriculum. For example, she contends that it is important for the programs to determine whether the adult is "illiterate," i.e., not literate in L1, or merely non-English literate.

Crandall also briefly addresses the use of bilingual education in VESL programs. Despite the need for more adequately trained bilingual personnel, and materials, she maintains that there is a need for bilingual education in all VESL programs (unless the students are fully bilingual). Unfortunately, many VESL programs are designed for students from a variety of language minority backgrounds for one specific job. Thus, even when programs are available, the abilities of the teacher and the resources of the program are severely taxed and bilingual education may not be possible.

CONCLUSIONS

The analysis of literacy among Chicanos must be understood from two major perspectives. First, it must be understood within the general context of literacy studies. Second, it must be seen within the context of the Chicano experience. Defining literacy is problematic since any attempt is necessarily value laden.

However, efforts to study literacy among major subgroups, such as Chicanos, who are known to have a large number of bilinguals and non-English-speakers, need to confront the issue of equating literacy with English literacy.

In addition, given the social stigma which can be attached to "illiteracy," caution must be used when entertaining alleged "cognitive" differences between literates and non-literates, and when attempting to use constructs such as "cognitive academic language proficiency." Since cognitive studies have indicated that literacy is easily confounded by schooling, it is also necessary to take into consideration the roles which schools play in reinforcing existing power relationships. Culturally biased literacy practices in schooling need to be analyzed. Differential literacy skills performance (and the analysis of differential grade-level achievement) need to be analyzed from the perspectives of both social class and culture.

It has been argued that those with limited literacy or non-literacy are typically less likely to come from "literate" environments, are less economically successful, and are less likely to participate in the political life of the country. Among Chicanos, analysis needs to focus on those indicating greater and lesser literacy abilities and levels of education relative to employment, earning power, social class identification, and political participation.

In addition, given the multilingual/multiliterate nature of the Chicano population, comparisons need to be made based upon language(s) of literacy.

However, some qualification is needed here. While literacy and educational achievement are associated with socioecomonic status and achievement, individual (and subgroup) gains in literacy or school achievement are relative to increases in expectations for the society as a whole. Increased literacy or schooling should not be held out as a panacea for "individual" problems, while ignoring the dynamics of inequities in power and economic relations in the larger society.

CHAPTER III

APPROACHES TO LITERACY MEASUREMENT, DESCRIPTION OF THE NATIONAL CHICANO SURVEY, AND METHODS FOR SECONDARY ANALYSIS

OVERVIEW

This chapter presents a rationale for using a self-report biliteracy measure in the analysis of the National Chicano Survey (NCS) and details methods used in the secondary analysis of the NCS. This chapter deviates slightly from the format of a traditional methods chapter by beginning with a brief review of issues in the history of literacy measurement in the United States. The purpose of this prologue is to provide a larger context for the techniques used in this study. Next, the chapter provides information on, and a description of, the NCS. It identifies key questions and variables, presents operational definitions for major language and literacy variables, and describes statistical methods used in the secondary data analysis.

ISSUES IN THE HISTORY OF MEASURING LITERACY AND IN THE USES OF MEASUREMENT

Given the panoramic nature of the literacy debate, and given the vastly different notions regarding literacy, it is easy to understand why measuring literacy is as troublesome as defining literacy. Moreover, our ability to measure literacy across a large population is also limited by the instruments and resources available to survey research. Significant attempts have been made to measure the historical rise of literacy as well as the economic conditions associated with it. However, the inclination to measure or test literacy has been inspired by a variety of motives.

Attempts to Determine Literacy Levels in the United States

Historically, there have been three common ways of estimating literacy: Direct measures or tests, self-assessments, and surrogate measures. One of the first attempts to measure literacy directly was based upon one's ability to sign one's name as opposed to merely making a mark on public documents; the ability to sign one's name was seen as an indication of literacy, whereas merely making a mark was seen as a sign of illiteracy (Clifford, 1984).[1]

In U.S. national samples, self-assessed literacy data has been used since the 1850 Census (Venezky, Kaestle, & Sum, 1987). From 1850 to 1940, the Census determined literacy based upon an individual's response to a question which asked whether or not he or she had the ability to read or write a simple message in English or some other language. Those who answered "yes" were considered literate. Those who answered "no" were considered non-literate (Kirsch & Guthrie, 1977-1978:493).

During the World War I era, reports of high levels of failure by Army recruits on entrance tests became well publicized. This resulted in a suspicion that U.S. Census data tended to over-estimate the literacy rate for the nation (Venezky, Kaestle, & Sum, 1987).

Throughout the 1920s and 1930s, concern about literacy and about how best to measure it persisted. Gradually there was an awareness that the notion of so-called illiteracy was acquiring a new meaning. The term was being used to include people who could read and write but who could not do so very well. Still, the primary national measure of literacy remained self-report data based upon the U.S. Census. In 1930, the rate was 97% for the Euro-American majority, 90% for foreign-born, and 84% for Blacks (Venezky, Kaestle, & Sum, 1987).

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[1] See Cressy (1977:43-61) for an interesting history of some parallel practices in England in a much earlier historical period (i.e., Tudor and Stewart England).

During the World War II era, the military again became interested in literacy measures. During the war, the draftees' abilities to follow written instructions on military matters were found to be insufficient by trainers. The army sought to determine the scope of its literacy problem in quantifiable terms. In 1940, the the army used a fourth grade equivalence measure and then temporarily settled upon completion of the fifth grade (in 1947), and then the sixth grade (in 1952), as a surrogate grade level equivalency measure (Hunter & Harman, 1985:16; Venezky, Kaestle, & Sum, 1987:12). The grade-level surrogate was chosen for the convenience of having a readily accessible measure. Some have argued that eighth grade or even twelfth grade would be more appropriate (Venezky, Kaestle, & Sum, 1987). Still others argued that the number of school years is not an accurate measure of literacy skills nor of the retention of those skills (Hunter & Harman, 1979:16; Kirsch & Guthrie, 1977-1978:493).

Given the limitations of the grade-level surrogate measure, a number of attempts have been made at more direct measures of functional literacy. In a review of various approaches to measuring functional literacy, Kirsch and Guthrie (1977-1978) found a range of 1 to 20% for so-called functional illiteracy.

Among the various measures, probably one of the best known is the Adult Performance Level (APL). The development of APL was sponsored by the Office of Education, beginning in 1971. The APL attempted to assess adults between the ages of 18 and 65. It tested 65 competencies held to be necessary in successful adult living. It concentrated on the areas of educational, economic, and job status success. The APL sought to determine three levels of competency; i.e., those who function with great difficulty, those who are functional but not proficient, and those who are highly proficient (Hunter & Harman, 1979:17-18). The underlying assumption was that the functional competencies represented and assessed by the test were necessary for a "successful" adult life.

Based upon the criteria established, approximately 20% of the APL sample was determined to be "functionally" incompetent. An additional 30% were found to be "functioning with difficulty." Thus, the APL found only half of the adult population to be functionally competent (Kirsch & Guthrie, 1977-1978).

Kirsch and Guthrie argue that one way to resolve these problems is to begin to make more distinctions between various kinds of literacy and to see literacy as a continuum. Rather than making sharp distinctions between literacy and illiteracy, they contend that we should distinguish between levels of literacy and kinds of literacy. The problem, they argue, is not one of

measuring illiteracy versus literacy, but rather is one of measuring "literacy" skills since most adults have minimal literacy abilities. In an attempt to make such distinctions, Kirsch and Jungeblut (1986:.64) have devised three broad areas of literacy assessment:

> (1) prose literacy--skills and strategies needed to understand and use information from texts that are frequently found in the home and community;
>
> (2) document literacy--skills and strategies required to locate and use information contained in nontextual materials that include travel maps, graphs, charts, indexes, forms, and schedules;
>
> (3) quantitative literacy--knowledge and skills needed to apply arithmetic operations.

This approach seems worthwhile insofar as authorities such as Scribner & Cole (1981, 1978) have argued against a unitary or dichotomized notion of literacy.

Despite their value and alleged objectivity, direct measures of literacy are also vulnerable to criticism. The major criticism is largely related to ecological validity. A literacy assessment which is imposed without the input of those being assessed can not reflect the literacy needs, realities or values of the individuals or of their community. This criticism has been leveled most strongly against one of the more popular measures of adult functional competency, the APL (Hunter & Harman, 1979).

According to Hunter and Harman (1979), critics argue that any objective criteria used for measurement is only as reliable and accurate as the judgements of the group that defines them. In the case of the APL, the defining group consisted of academicians and adult basic education administrators, and only a small sample of students enrolled in ABE programs. Obviously, those unable or unmotivated to enroll in ABE classes were excluded from input. Kirsch and Guthrie (1977-1978:499) also note that the APL failed to define success in other than economic and educational terms.

Another problem with competency testing in efforts to determine functional literacy is that the test situation is usually only an artificial or contrived approximation of an individual's actual ability to function (Erickson, 1984). Consequently, the validity of simulation tests of literacy has been questioned on the basis of their inauthenticity (Edelsky, 1986; Edelsky et al., 1983b). Gee (1986) adds that many of the tasks used in so-called direct measures of literacy and reasoning ability (including those used by Vygotsky (1978), Luria (1976), Greenfield (1972), and Scribner and Cole, 1981, 1978), are "tests of the ability to use language in a certain way. In particular they are tests of what we might call explicitness" (pp. 731-732). Thus, general claims made upon the basis of specific tests in school cannot be equated with contexts outside of school.

Concerning the ecological validity of competency tests, Hunter and Harman (1985) conclude:

> ...[I]f we take seriously the dynamic interaction between self-defined needs and the requirements of society, measurement of functional literacy becomes infinitely more elusive. Who but the person or group involved can really describe what 'effective functioning in one's own cultural group' really means? How is a 'life of dignity and pride' measured? The basic question may be: Whose needs are served by generalized statistics about the population?

Historically, the tendency of individuals to inflate, or have an inflated view of, their abilities on self-reported census questionnaires may, in part, be related to the structure of the questions asked. Until 1940, the yes/no format of the census question forced a simplistic dichotomization of literacy. Since most of the adult population has at least rudimentary reading and writing abilities, dichotomizing literacy into illiteracy/literacy was of little value. However, the tendency of some researchers to attack self-reported measures may, thus, be as much a limitation of the format of the question as it is of the fact that the data is self-reported. LeBlanc and Painchaud (1986) have argued that self-assessment can be a valuable tool (when proper controls are used).

One of the major ways in which self-reported data instruments can be improved is by expanding the range of response choices available. Since recent direct measures such as the Young Adult Literacy Survey (Kirsch & Jungeblut, 1986) are constructed to conceptualize literacy as a continuum of abilities in discrete categories of skills, there is no reason why self-reported measures cannot be constructed along similar lines.

Summary and Rationale for a Biliteracy Focus

The major limitation of the grade-level completion measure is that the number of years of schooling completed is no guarantee of skill mastery, since there is wide variation in individual abilities at any grade level, and since there is wide variation in the retention of skills taught. Its strength, however, is that it does provide a measure of exposure to schooling which can be compared across groups. Since schooling represents a kind of status attainment, it is worth measuring in its own right. While direct measures avoid the pitfalls of self-assessment, direct measures, such as competency tests and simulations of real-life skills, which may be prescriptive, lack adequate controls for ecological validity.

When measuring literacy skills, there is the potential that testing may have negative results in the sense that it labels groups and certifies their incompetence. The positive role of measurement as an assessment tool should be to determine the kinds of literacy necessary for society as a whole, and which are desired by individuals within their own communities.

All three of the basic approaches to measurement (i.e, the so-called direct measures, surrogate measures, and self-reported measures) have strenghts and limitations. Given their attempts at objectivity, direct measures are generally preferrable to self-reported measures, and self-reported measures are generally preferrable to surrogate measures, since surrogate measures provide no guarrantee of compentency. Regardless of the measure used, while literacy is probably best conceived as a continuum rather than as a dichotomy, thresholds such as "functional literacy" are useful in making comparisons or determining needs; however, they should not be taken as absolute cut off points. Finally, no single approach can be taken as a fool proof means of assessing literacy.

Despite the pros and cons of various techniques used in measuring literacy, historically what has generally been missing in nearly all national surveys--even now--is a focus on literacy in

languages other than English. This omission is significant because it reinforces the common notion that English literacy--at least in so far as the United States is concerned--is the only literacy which is worthy of measurement. Since it is likely that a high percentage of those who are held to be "illiterate" (in English) are literate in Spanish (or other languages), failure to recognize non-English literacy abilities increases the alleged pool of illiterates, and stigmatizes those literate in other languages as being non-productive or as being unable to function. The singular focus on English literacy, thus, tends to inflate the magnitude of the so-called "literacy crisis." Consequently, there is a need to design national surveys so that they allow for an analysis of literacy across languages whenever possible. To date, the National Chicano Survey is the only nationally representative survey which has allowed for such an analysis.

THE NATIONAL CHICANO SURVEY

The NCS was designed as a national sample (or, more accurately, as a sample representative of 90% of the national Chicano population). Its value lies in the ability to generalize from the sample to the U.S. Chicano population (in 1979). Like

other national surveys, the NCS relied upon self-reported data. Consequently, it is not possible to use a direct measure of literacy in analyzing the NCS. However, it was possible to analyze self-reported literacy data. Though limited, the NCS literacy data tend to be richer than literacy data in the 1980 U.S. Census and the 1976 Survey of Income and Education (SIE). There are more questions in the NCS related to literacy than in the other major national surveys. Moreover, since there are parallel literacy-related questions for English and Spanish, it is possible to analyze literacy across English and Spanish using a biliteracy measure (described below). Since the Chicano population in the U.S. is largely bilingual, and since there is a relationship between language proficiency and language background and literacy, a biliteracy measure is more appropriate for the analysis of the predominately bilingual Chicano population.

It is also possible to use the NCS to construct a surrogate, years-of-schooling, measure (see below). However, since self-report data is generally more desireable than surrogate measures, the self-reported biliteracy measure was used as the principle literacy measure in the analysis of the data.

The National Chicano Survey (NCS) was conducted in 1979 by the Institute for Social Research with grants from the Ford

Foundation and the National Institutes of Health. Carlos Arce was the principal investigator. It was a bilingual survey of a nationally selected and representative sample of the Mexican origin population in the United States. It was designed to gather information on many different aspects of Chicano life, including social, demographic, political, and mental health characteristics.

Sampling and Design

The purpose of the NCS was "to compile a statistically representative and comprehensive body of empirical information about the social, economic and psychological status of Chicanos" (Arce, n.d.: ii). A stratified multi-stage area probability design was employed by the NCS with both Primary Sampling Units (PSU) and Secondary Sampling Units (SSU). PSUs were selected based upon Spanish heritage as the identifier. However, since this identifier includes non-Mexican Latinos, adjustments for this ambiguity had to be made (Santos, 1985:9).

It utilized a household survey of individuals of Mexican descent living in Arizona, California, Colorado, Texas and Chicago, Illinois. Although the other states were excluded, the geographical scope of the study exceeded that of any previous study on Chicanos, and the survey covered a geographical area where about 90% of the Mexican origin population in the United States live (Santos, 1985).

The target population was "All heads of households or spouses of heads of Mexican descent residing in households within the United States in 1979" (Santos, 1985:2). Mexican descent was operationally defined to include any person reporting "at least two of their grandparents as being solely Mexican" (Santos, 1985:2). However, in Arizona, Colorado, and New Mexico, the definition was expanded to allow for individuals of "Spanish" ancestry who descended from Spanish explorers, colonizers, and settlers. In defining its sample population, the NCS treats "person of Mexican origin/descent" and "Chicano" as operationally synonymous. These terms are treated as encompassing both the native born, immigrants, and undocumented persons.

The survey was conducted from February through August of 1979. The sample design produced 12,000 eligible housing units of which 11,000 were actually screened using a five minute screening instrument. Of these, 1,360 had at least one eligible member. Interviews were obtained from 991 respondents thereby yielding a response rate of 73%. Forty-four percent of the respondents were residents of California; about 35% were from Texas; 16% were from the Southwest, and just over 5% from the Northwest (i.e, the Chicago area).[2] Face-to-face interviews were

[2] The label Northwest (used in the NCS codebook) is unfortunate. According to Garcia (1988), the NCS originally was supposed to include additional survey sites in the Pacific

conducted in either English or Spanish and lasted an average of three hours and twenty minutes. (Santos, 1985:20)

Approximately 60% of the respondents were female, which reflects both a disproportionate representation in the population and a slightly higher refusal rate for men. Sixty-two percent of the respondents were born in the United States compared to 38% who were born in Mexico. The mean age of the respondents was 40.1 years for females and 39.6 years for males (Santos, 1985:20-21). Fifty-two percent of the interviews were conducted in Spanish, and 48% were conducted in English (Arce, n.d.:ii).

Survey Instrument

The survey questionnaire was 100 pages long and contained both closed-ended and open-ended questions; approximately one third were open-ended. The instrument used a side-by-side Spanish and English format to facilitate interviewing in either language or bilingually. The major areas covered in the questionnaire were related to mental and physical health, family background, values and customs, language use and attitudes, employment, and social status/identity.

Northwest. Due to insufficient funds, these plans were dropped. The greater Chicago area was included given its large concentration of Chicanos. While the inclusion of the Chicago sample increased the national representativeness of the NCS to about 90% (Santos, 1985), it made the comparison (i.e., states to metropolitan area) asymmetrical.

The questionnaire also included a number of items useful in the analysis of educational achievement and literacy among Chicanos. These include both years-of-schooling data and self-assessment measures of literacy in both English and Spanish. This is particularly useful, since by allowing for literacy assessment in both languages, the NCS facilitates a broader assessment of literacy than most national surveys and allows for a biliteracy comparison to educational achievement.

In the survey, at the beginning of each interview, the respondents were asked: "How would you prefer that I ask the questions; in English? O si usted prefiere, en Español?" A third option was to have the interview conducted in both. Consequently, it is possible to use the language of the interview as a direct means for describing the language preference of the respondents when the respondent is presented with a clear choice (although it is conceivable that Spanish language loyalty could have influenced choice).

The *NCS Codebook* (Arce, n.d.) lists 1,621 variables (excluding NCS recodes). Variables in the survey relevant to issues in this study pertain to reading and writing abilities (in English and Spanish), grade-level achievement, language background, language use, language interaction, nativity, sex, socioeconomic

characteristics, naturalization, political behavior, language attitudes, and attitudes toward educational success and failure and toward bilingual education.

Variables Selected from the National Chicano Survey for Secondary Analysis

The following list of variables (below) have been selected for secondary analysis from the NCS. While the NCS contained over 1,600 variables, only variables related to language, literacy, schooling, attitudes toward language and schooling, demographic characteristics, political behavior, and economic behavior and characteristics were selected for this study. Initially about 180 variables were selected. The final set was reduced to those below. Variables similar to those identified herein were not included if they had a large proportion of missing data, or if they were so similar to the variables below that they failed to add insight to the findings. Variable identification is based upon the NCS codebook developed by Arce (n.d). Codebook identifiers are listed by the original NCS variable identifier and a variable label (e.g., V4: Region). Next, the original form of the NCS survey question is presented, followed by response options. Recoded variables are indentified along with their recoded values.

NCS VARIABLES, SURVEY QUESTION, AND RECODE LIST

VARIABLE V4: REGION OF THE COUNTRY
Primary Area:
1. California 2. Texas 3. Southwest 4. Northwest (i.e., the Chicago Area)

VARIABLE V6: LANGUAGE OF THE INTERVIEW (LANGUAGE CHOSEN FOR THE INTERVIEW)
How would you prefer that I ask the question; in English? O si usted prefeire, en Español?
1. English 2. Spanish

VARIABLE V7: LANGUAGE OF THE INTERVIEW (ACTUAL LANGUAGE USED)
(Language the respondent actually used during the interview)
1. English 2. Spanish

VARIABLE V73: BILINGUALISM ADVANTAGES
Are there advantages to being bilingual in the United States?
1. Yes 2. No

VARIABLE V74: BILINGUALISM ADVANTAGES
What are they (i.e., the benefits):
PERSONAL BENEFITS:
a. Improve self esteem, personal satisfaction.
b. Broadens cross-cultural understanding generally.
c. Increases communication skills.
d. Improves one's image.
e. Home/family advantages.
PRACTICAL BENEFITS:
f. Societal/community benefits.
g. Improves employment opportunities.
h. Improves education opportunities or success.
i. General Approval, improves opportunities generally.

VARIABLE V81: SHOULD PARENTS DISCOURAGE SPANISH
Do you think parents should discourage their children from speaking Spanish?
1. Yes 2. No

VARIABLE V319: WORKING NOW
Are you working now?
1. Yes 2. No

VARIABLE V320: WORKED IN 1977 OR 1978
Have you worked for pay in 1977 or 1978?
1. Yes 2. No

VARIABLE V321: EVER WORKED FOR PAY
Have you ever worked for pay?
1. Yes 2. No

VARIABLE V330: WANT A JOB SINCE STOPPED WORKING
Has there been a time since then (i.e., since you stopped working) when you wanted to have a job?
1. Yes 2. No

VARIABLE V462: SEX
Respondent is:
1. Male 2. Female

VARIABLE V469: AGE
How old is respondent?
Range: 1 to 96 years.
Recoded: 18 to 25 years, 26 to 35 years, 36 to 45 years, 46 to 55 years, 56 to 65 years, 66 or more years of age.

VARIABLE V476: NATIVITY
In what country were you born?
Recoded: 1. U.S.A. 2. Mexico

VARIABLE V497: GRADE-LEVEL ACHIEVEMENT
How many years were you in school?
Range: 0 to 21 years.
Recoded: Into less than six years, six to eleven years, and twelve or more years.

VARIABLE V1017: WHY PERSONS OF MEXICAN DECENT RECEIVE POOR EDUCATION OR JOBS
In this country, if people of Mexican descent do not get a good job, it is because:
1. They haven't had the same opportunities as others in this country, or:
2. They have no one to blame but themselves.

VARIABLE V1020: WHY PERSONS OF MEXICAN DESCENT DON'T GO TO COLLEGE
If people of Mexican descent don't go to college, it is because:
a. They think education is not important, or,
b. The schools don't prepare them well.

VARIABLE V1060: VOTE IN 1976
Did you vote in the last U.S. presidential election -- 1976?
1. Yes 2. No
(Selected if U.S. citizen only and at least eighteen years of age in 1976)

VARIABLE V1063: REGISTER TO VOTE IN 1976
Are you registered to vote?
1. Yes 2. No
(Selected if U.S. Citizen only and at least eighteen years of age)

VARIABLE V1064: SUPPORT A POLITICAL PARTY
In general, which political party do you support?
1. None
2. Democrat
3. Republican
4. Other

VARIABLE V1253: FAMILY INCOME
Now would you look at this card? Could you please tell me which letter comes closest to the total income of your family last year?

a. Less than $2,000	f. $6,000 to $6,999	k. $11,000 to $11,999
b. $2,000 to $2,999	g. $7,000 to $7,999	l. $12,000 to $14,999
c. $3,000 to $3,999	h. $8,000 to $8,999	m. $15,000 to $19,999
d. $4,000 to $4,999	i. $9,000 to $9,999	n. $20,000 to $24,999
e. $5,000 to $5,999	j. $10,000 to $10,999	o. $25,000 to $29,999
		p. $30,000 or more

VARIABLE V1428: LANGUAGE USED AT HOME AS A CHILD
When you were a child, what language was used most in your home?
1. Only English 2. Mostly English 3. Both Equally
4. Mostly Spanish 5. Only Spanish

VARIABLE V1429: LANGUAGE USED IN NEIGHBORHOOD AS A CHILD
When you were a child, what language was used most in your neighborhood?
1. Only English 2. Mostly English 3. Both Equally
4. Mostly Spanish 5. Only Spanish

NCS VARIABLE V1438: HOW WELL READ ENGLISH
How well do you read newspapers and books in English?
1. Not at all 2. A little 3. Some 4. Well 5. Very well
Recoded (1=1, 2; 3=2; 4, 5=3): 1. Not read 2. Limited reading 3. Read well

VARIABLE V1439: HOW WELL WRITE ENGLISH
How well do you write letters in English?
1. Not at all 2. A little 3. Some 4. Well 5. Very well
Recoded (1=1; 2, 3=2; 4, 5=3): 1. Not write 2. Limited writing 3. Write well

NCS VARIABLE: V1440 HOW WELL UNDERSTAND ENGLISH
How well do you understand a conversation in English?
1. Not at all 2. A little 3. Some 4. Well 5. Very well
Recoded (1=1; 2, 3=2; 4, 5=3): 1. Not understand 2. Limited understand
3. Read well

VARIABLE V1441: HOW WELL CONVERSE IN ENGLISH
How well do you carry on a conversation in English?
1. Not at all 2. A little 3. Some 4. Well 5. Very Well
Recoded 1=1; 2, 3=2; 4, 5=3: 1. Not converse 2. Limited converse
3. Converse well

VARIABLE V1442: HOW WELL READ SPANISH
How well do you read newspapers and books in Spanish?
1. Not at all 2. A little 3. Some 4. Well 5. Very Well
Recoded (1=1; 2, 3=2, 4, 5=3) : 1. Not read 2. Limited reading 3. Read Well

VARIABLE V1443: HOW WELL WRITE SPANISH
How well do you write letters in Spanish?
1. Not at all 2. A little 3. Some 4. Well 5. Very well
(Recoded 1=1; 2, 3=2; , 4, 5=3): 1. Not Write 2. Limited Writing
3. Write Well

VARIABLE V1444: HOW WELL UNDERSTAND SPANISH
How well do you understand a conversation in Spanish?
1. Not at all 2. A little 3. Some 4. Well 5. Very well
Recoded: 1. Not understand 2. Limited understand 3. Read well

VARIABLE V1445: HOW WELL CONVERSE IN SPANISH
How well do you carry on a conversation in Spanish?
1. Not at all 2. A little 3. Some 4. Well 5. Very Well
(Recoded 1=1; 2 ,3=2; 4,5=3) 1. Not converse 2. Limited converse
3. Converse well

VARIABLE: V1463 CHILDREN OF MEXICAN DESCENT SHOULD READ AND WRITE TWO LANGUAGES
Children of Mexican descent should learn to read and write in both Spanish and English.
1. Strongly Agree 2. Agree 3. Disagree 4. Strongly Agree

VARIABLE: V1536 FATHER'S LEVEL OF SCHOOLING
How many years of schooling did your father get?
Range: 0 to 21 years.
Recoded: Into less than six years, six to eleven years, and twelve or more years.

VARIABLE: V1539 MOTHER'S LEVEL OF SCHOOLING
How many years of schooling did your mother get?
Range: 0 to 21 years.
Recoded: Into less than six years, six to eleven years, and twelve or more years.

VARIABLE V1550: AGE WHEN IMMIGRATED
How old were you when you first came to the United States?
Range: 1 to 96
Recoded: 1 to 5, 6 to 8, 9 to 11, 12 to 15, 16 to 18, 19 or more years of age.

METHODS USED IN THE SECONDARY ANALYSIS

This study entailed secondary analyses of the original NCS data. Three types of literacy variables were constructed: (1) language specific literacy measures (one for English and one for Spanish), (2) a biliteracy measure (across English and Spanish), and (3) a grade-level surrogate measure.

The recoded variables were based upon items related to reading and writing in the original NCS survey. Respondents were asked to describe how well they read English, write English, read Spanish, and write Spanish. To solicit this information, the NCS used Likert-like scales. Summarizing from the variables list (above), the relevant questions were:

Q: How well do you read newspapers and books in English?
Q: How well do you write letters in English?
Q: How well do you read newspapers and books in Spanish?
Q: How well do you write letters in Spanish?

Response options were: (a) not at all, (b) a little, (c) some, (d) well, (e) very well. Note: This categorization allows for comparison with literacy analyses of other national surveys which attempt a simple dichotomization of literacy/ illiteracy

The five levels of ability allowed for an analysis of the data which was more compatible with the view that literacy is best conceived of as a continuum across skill areas (Kirsch & Jungeblut, 1986; Ortiz, 1987). However, since the assessment was subjective, and since interpreting the range of difference between "a little" and "some," and between "well" and "very well" is problematic, literacy abilities are recoded at three levels of ability for the language specific analysis of both English and Spanish. An English literacy scale and a Spanish liteacy scale was derived from reading and writing abilities in each language. Initially, these were nine-value schemes (one for English and one for Spanish), which covered all possible combinations of reading/writing skills (e.g., limited writer, strong reader, etc.).

The data generally indicated a symmetrical pattern of response for reading and writing ability. While interesting in itself, these more complex schemes were not practical for most crosstabulations (in part because some of the cell counts were extremely low). The distribution did suggest that the majority of respondents had relatively parallel abilities between reading and writing though, as expected, reading was more likely to be picked as the stronger skills when there was a discrepancy. The data tended to lend credence to the position of those who argue for parallel process (see Kucer, 1985).

Next, the nine-value scales were collapsed into three-value scales to simplify presentation of the data from crosstabulations and to allow for a larger number of cases in each category. The three value-scales used the following categories: (1) non-literate, (2) limited literacy, and (3) functionally literate. The following chart (see next page) illustrates the procedures to construct the variable.

TABLE 3-1

PROCEDURE USED TO CONSTRUCT ENGLISH AND SPANISH LITERACY COMPUTED VARIABLES

ORIGINAL	RECODE	RECODED VARIABLE	COMPUTATION
1.1 READING ABILITY ABILITY AT FIVE VALUES		2.1 READING ABILITY AT THREE VALUES	
a. Well b. Good c. Some d. A Little e. Not at All		1.1a + 1.1b = 2.1a Strong Reader 1.1c + 1.1d = 2.1b Limited Reader 1.1e = 2.1c Non-reader	
1.2 WRITING ABILITY			2.1 X 2.2 = 3
a. Well b. Good c. Some d. A Little e. Not at All		1.2a + 1.2b = 2.2a Strong Reader 1.2c + 1.2d = 2.2b Limited Reader 1.2e = 2.2c Non-reader	

COMPUTED VARIABLE	RECODE	R E C O D E D VARIABLE
3. READ AND/OR WRITE AT NINE VALUES		4. LITERACY AT THREE VALUES
a. Strong Reader/Strong Writer b. Strong Reader/Limited Writer c. Strong Reader Only d. Strong Writer/Limited Reader e. Strong Writer Only f. Limited Reader/Limited Writer g. Limited Reader Only h. Limited Writer Only i. Non-Reader/Non-Writer	3a + 3b = 4a Functional Literacy 3c thru 3h = 4b Limited Literacy 3i = 4c non-literacy	

To facilitate biliteracy analyses, the three-value English literacy and Spanish literacy scales were recomputed to form a biliteracy measure. First, a nine-value scale was devised. The nine-value scheme consisted of all possible combinations of English literacy and Spanish literacy (e.g., limited English literacy and strong Spanish literacy, etc.). For economy of presentation and to increase the number of cases per cell in crosstabulations, the nine-value scale was collapsed into a four value scheme consisting of: (1) English dominant literacy (which will be referred to as "English literacy"), (2) biliteracy, (3) Spanish dominant literacy (which will be referred to as "Spanish literacy") and (4) non-functional literacy (which includes both non-literacy and limited literacy).

In reducing the number of categories from nine to four, a major operational decision was made regarding the categorization of biliterates and monoliterates, and regarding the categorization of all those not functionally literate in either language. Nearly 70% of the sample reported some level of biliterate ability (if "limited" abilities are included along with "functional abilities"). Only 6.4% indicated functional literacy in English (with no ability in Spanish), and only 7.8% indicated functional literacy in Spanish (with no ablitity in English). In order to capture the difference between those fully biliterate and those with only limited second

language literacy, monoliterates and partial biliterates were categorized together. While not ideal, this technique allows for a more proportionate distribution of the number of cases per literacy category.

Operationally, this technique dichotomizes literacy into functional literacy and non-functional literacy (since those with functional first language literacy, but no second langauage literacy or only limited second language literacy were categorized in the appropriate English or Spanish literacy dominant categories). Findings based upon this technique should not be construed as implying a strict dichotomy between literate and non-literate. Rather functional literacy should be seen as a threshold on a literacy continuum. Also, in a technical sense, the labels "English literate" and "Spanish literate" (used herein) are not to be taken as completely synonymous with "English monoliterate" or "Spanish monoliterate," since the majority of subjects within each category appear to be partially biliterate.

Using this biliteracy scheme, literacy abilities in English may be compared with literacy abilities in Spanish. Unlike the U.S. Census and other national surveys which now focus on English literacy only, this comparison across English and Spanish allows for a richer profile of literacy abilities. The construction of the biliteracy variable is summarized below:

TABLE 3-2 (Numbering continued from Table 3-1)

PROCEDURE USED TO CONSTRUCT THE BILITERACY VARIABLE

VARIABLES	COMPUTATION	COMPUTED VARIABLE
4.1 ENGLISH LITERACY AT THREE VALUES a. Functional Literacy b. Limited Literacy c. Non-literacy 4.2 SPANISH LITERACY AT THREE VALUES a. Functional Literacy b. Limited Literacy c. Non-literacy	4.1 X 4.2 =	5. LITERACY ACROSS ENGLISH/SPANISH a. Funct.Eng./Funct. Span. Lit. b. Funct. Eng./Limited Span.Lit. c. Funct. Eng. Lit. Only d. Funct. Span./Lim. Eng. Lit. e. Funct. Span. Lit. Only f. Lim. English/Lim. Spanish Lit. g. Limited English Lit. Only h. Limited Spanish Lit. Only i. Non-literacy

RECODE	RECODED VARIABLE
	6. LITERACY ACROSS ENGLISH/SPANISH AT FOUR VALUES
5a =	6a Functional Biliteracy (English/Spanish)
5b + 5c =	6b English Dominant Functional Literacy
5d + 5e =	6c Spanish Dominant Functional Literacy
5f thru 5i =	6d Not Functionally Literate (English/Spanish)

Note: The grouping of all non-literates and limited literates together (in 6d) is based upon their lack of functional literacy in either language and is intended to facilitate economy of data presentation and should not be construed as meaning that a strict dichotomy between literacy and non-literacy actually exists.

Based upon a recode of an NCS years-of-schooling variable, a grade-level achievement surrogate measure of literacy was also constructed. Literacy based upon grade-level achievement was operationally defined as six years of schooling or more. This definition was used since it allowed for data comparisons with the U.S. Census and other national surveys such as the Survey of Income and Education (SIE). In addition to the six-year threshold, schooling achievement was also determined for grades 7 through 11 and for grades 12 and above. The purpose of these two additional cut-off points was to ascertain the percentages of those who fail to achieve the 12 year threshold used to operationalize the definition of "educational disadvantage." This measure has been used by the the U.S. Department of Education and by the National Advisory Council on Adult Education (NACAE) (Hunter & Harman, 1979).

The Limitations of the Literacy Operational Definitions

These techniques imply certain definitions of literacy which are less than ideal. "Non-literacy" becomes the inability to read newspapers or books or write letters. "Limited literacy" becomes the minimal ability to read newspapers or books, or to do this and write letters with minimal ability. "Functional literacy" becomes the ability to read newspapers and books well and to write letters

well. Regarding the surrogate years-of-schooling, measure, "functional literacy" is equated with six or more years of schooling (no attempt is made to determine "limited literacy" using years-of-schooling).

Given the constraints placed upon secondary analysis because of the nature of the questions of the original survey, there are few alternatives. However, caution needs to be used in interpreting the results. In addition to the subjective nature of the self-assessments regarding the respondent's abilities to read newspapers and write letters, these "literacy" indicators are rather limited in themselves. There also is no indication of the frequencies of these activities.

A more ideal definition of functional literacy would include the ability to do meaningful tasks which involve the use of reading and writing to fulfill social or economic purposes (and which are situationally based within particular contexts) in order to fulfill one's (or one's group's) own purposes, as well as the demands of society. However, nationally representative ethnographic studies are hardly feasible. While neither the NCS, nor other major national surveys, are specifically constructed to collect data on literacy, they do allow for generalizations to the national population (and significant subgroups) which could otherwise not be easily made--if they could be made at all.

Operational Definitions and Recoding Techniques for Bilingualism and Language Dominance

Bilingual abilities are based upon computed variables related to oral English and Spanish. First, an eight-value measure was used which included assessments of oral language ability as strong and weak across English and Spanish (e.g., strong English, limited Spanish). While more detailed, this scheme is problematic, since the number of cell cases for some categories are very small.

Thus, both for economy and power of description, it is desirable to collapse the eight categories into three: (1) English language dominant, (2) Spanish language dominant, and (3) fully bilingual. The procedures used to develop the bilingual variable are presented in the table below:

TABLE 3-3

PROCEDURE USED TO CONSTRUCT THE BILINGUALISM/ LANGUAGE DOMINANCE VARIABLE

ORIGINAL	RECODE	RECODED VARIABLE	COMPUTATION
1.1 ENGLISH CONVERSATION ABILITY AT FIVE VALUES		2.1 CONVERSATION	
a. Well b. Good c. Some d. A Little e. Not at All		1.1a + 1.1b = 2.1a Strong Conversational Ability 1.1c + 1.1d = 2.1b Limited Conversational Ability 1.1e = 2.1c No Conversational Ability.	
1.2 SPANISH CONVERSATION ABILITY			2.1 X 2.2 = 3
a. Well b. Good c. Some d. A Little e. Not at All		1.2a + 1.2b = 2.1a Strong Conversational Ability. 1.2c + 1.2d = 2.1b Limited Conversational Ability. 1.2e = 2.1c No Conversational Ability	

COMPUTED VARIABLE	RECODE	RECODED VARIABLE
3. ENGLISH/SPANISH CONVERSATION ABILITY AT EIGHT VALUES		4. LITERACY AT THREE VALUES
a. Strong English/Strong Spanish b. Strong English/Limited Spanish c. Strong English Only d. Strong Spanish/Limited English e. Strong Spanish Only f. Limited English/Limited Spanish g. Limited English Only h. Limited Spanish Only		3a + 3f = 4a Bilingual 3b + 3c + 3g = 4b English Dominant 3d + 3e + 3h = 4c Spanish Dominant

Note: While "No English/No Spanish Ability" (3.i) was a possibility, this category was eliminated since there were no cases for it in the cell.

Analysis of Oral Language Characteristics

Language background characteristics of Latinos have been identified as having a high correlation with English literacy skills (Ortiz, 1987). In this study, the relationship between literacy abilities and oral language factors were explored using the following variables: language chosen for/used in the interview, bilingual abilities, language of childhood (i.e., language used at home when the respondent was a child), and language of the respondent's childhood neighborhood.

Statistical Procedures

The secondary analyses involved statistical manipulation of the data, by means of crosstabulations using Chi-square. The biliteracy variable was crosstabulated with language, and other respondent characteristics such as region of residence, sex, age, age upon immigration, language, educational achievement, parental educational achievement, income, employment, and political participation. Additional crosstabulations were also run to determine the association between the biliteracy variable and attitude variables related to language and education.[3]

[3] For those interested in comparing findings from the biliteracy measure with the surrogate years-of-schooling surrogate measure, parallel grade-level achievement crosstabulation tables were included in Appendix A.

Subgroup analysis within this study is limited to comparisons of the U.S.-born versus the Mexican-born. Thus, nativity is used as the principal controlling variable in three-way comparisons which were used primarily with various language variables.

Data is reported in the form of percentages, and frequency counts from crosstabulations. Kendall's Tau was used to determine the concordance (i.e., agreement) between literacy variables (e.g., between English and Spanish literacy and grade-level achievement). Pearson's r was run to determine the association between grade-level achievement and other variables (see Appendix A). It was not used in comparisons involving the biliteracy variable, since the biliteracy variable utilizes nominal categories. Findings Statistical significances were set at $\leq .05$ for all measures.

Treatment of Missing and Incomplete Data

The treatment of missing data, herein, follows Borg and Meredith (1983), who suggest reducing the valid n when reasons for the missing data are not clear. While missing data was within tolerable limits for most of the variables selected for secondary analysis (ranging from 1% to 3% for most variables selected), on

some of the variables (where the amount of missing data is high), interpretation becomes problematic. For all computations, the number of valid cases were indicated (991 cases are possible; 979 is the highest for any of the crosstabulations).

Responses of "don't know" were computed as missing data when this response option failed to provide useable data (e.g., the question on personal income). In addition, among computed variables, there were occasional instances of incomplete data. For example, if a respondent answered that he or she read English well but failed to provide any data for English writing ability, the data for the computed English literacy profile was incomplete for that individual. Incomplete data in such cases was not usable and, therefore, was computed as missing.

CHAPTER IV

FINDINGS BASED UPON A SECONDARY ANALYSIS OF THE NATIONAL CHICANO SURVEY

OVERVIEW

This chapter profiles the literacy characteristics of the Mexican origin population and describes the relationship between literacy and various demographic, socioeconomic, political, linguistic, and attitudinal factors. The chapter is divided into the following major sections. In the first section, the general literacy characteristics of Chicanos are described for English literacy, Spanish literacy, and biliteracy, and the relationship between literacy and grade-level achievement is described. In the second section, findings are presented related to the association between literacy and demographic variables such as geographical location, nativity, sex, age, and parental education. In the third section, the association between literacy and socioeconomic and social class variables is discussed. In the next section, the relationship between literacy and political variables is explored. The fifth section profiles the relationship of language background and language use variables with literacy. In the sixth section, language

attitudes among Chicanos toward Spanish and English are explored. The last section presents data related to attitudes toward education.

GENERAL LITERACY AND SCHOOLING CHARACTERISTICS OF THE ADULT MEXICAN ORIGIN POPULATION

While the level of non-functional literacy is high among the sample as a whole, the biliteracy analysis is useful in distinguishing between non-English literacy specifically and the larger problem of non-literacy generally (since non-literacy levels are far lower when literacy is approached from the perspective of literacy across languages). Half (50.4%; n = 499) of the sample indicated functional literacy abilities in English compared to 41% (n = 408) for Spanish literacy. Twenty percent (n = 250) of the sample may be considered functionally biliterate in English and Spanish (see Tables 4-1 and 4-2 below):

TABLE 4-1

FREQUENCIES FOR BILITERACY IN FOUR VALUES (BILIT4)

VALUE LABEL	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
ENGLISH LITERACY DOMINANT	305	30.8	31.7	31.7
ENGLISH/SPANISH BILITERATE	194	19.6	20.1	51.8
SPANISH LITERACY DOMINANT	214	21.6	22.2	74.0
LIMITED OR NON-LITERATE	250	25.2	26.0	100.0
MISSING CASES	28	2.8	MISSING	
TOTAL	991	100.0	100.0	

VALID CASES 963

TABLE 4-2

FREQUENCIES FOR GRADE-LEVEL ACHIEVEMENT EDUCATION (V497)

VALUE LABEL	FREQUENCY	PERCENT	VALID PERCENT	CUM PERCENT
LESS THAN 6 YEARS	264	26.6	27.0	27.0
6 TO 11 YEARS	392	39.6	40.0	67.0
MORE THAN 12 YEARS	323	32.6	33.0	100.0
MISSING CASES	12	1.2	MISSING	
TOTAL	991	100.0	100.0	

VALID CASES 979

Findings for grade-level achievement (as a surrogate measure of literacy) are similar to those for biliteracy. Using the grade-level achievement measure, 27% (n = 264) of the sample may be considered non-functionally literate. Using a threshold of less than grade twelve, two thirds (n = 656) of the sample are educationally disadvantaged (Table 4-3).

As expected, the relationship between literacy and grade-level achievement is relatively strong. While there was a general tendency for English literacy and biliteracy to be associated with higher grade-level achievement, this was not the case for those literate in Spanish only. Only 57% (n = 121) of those literate in Spanish only achieved more than six years of schooling compared to 98% (n = 297) for those literate in English only and 93% (n = 180) for biliterates. Results were significant; $\chi^2(6, n = 957) = 421.86244$, $p < .05$.

While it was not possible to correlate the biliteracy variable with grade-level achievement (since it contains nominal categories), it was possible to determine the degree of concordance of the English literacy variable and the Spanish literacy variable with grade-level achievement. Using Kendall's Tau B, there was a concordance of t = .62417 (n = 957), $p < .05$ for English literacy. Results for Spanish literacy were not significant, t= 0.01371 (n =

958), $p > .05$; Spanish literacy appears to have been confounded by nativity (further analysis is needed controlling for nativity and age).

TABLE 4-3

BILITERACY BY GRADE-LEVEL ACHIEVEMENT

BILIT4	V497 LESS THAN 6 YEARS	6 TO 11 YEARS	MORE THAN 12 YEARS	ROW TOTAL
1.00 ENGLISH LITERATE	7	119	178	304
	2.3	39.1	58.6	31.8
	2.7	31.0	56.5	
	.7	12.4	18.6	
2.00 BILTERATE	13	69	111	193
	6.7	35.8	57.5	20.2
	5.0	18.0	35.2	
	1.4	7.2	11.6	
3.00 SPANISH LITERATE	91	107	14	212
	42.9	50.5	6.6	22.2
	35.3	27.9	4.4	
	9.5	11.2	1.5	
4.00 LIM OR NON-LIT	147	89	12	248
	59.3	35.9	4.8	25.9
	57.0	23.2	3.8	
	15.4	9.3	1.3	
COLUMN TOTAL	258	384	315	957
	27.0	40.1	32.9	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
421.86244	6	0.0000	52.031	NONE

NUMBER OF MISSING OBSERVATIONS = 34

DEMOGRAPHIC CHARACTERISTICS, LITERACY, AND GRADE-LEVEL ACHIEVEMENT

Because describing literacy across English and Spanish has the advantage of distinguishing non-English literacy from non-literacy, biliteracy is crosstabulated with various demographic variables below. However, educational achievement provides not only a surrogate measure of literacy, but information upon which social perceptions of literacy competence are based (parallel grade-level achievement crosstabulation tables and correlational results between grade-level achievement and the various demographic variables based upon Pearson's *r* have been included in Appendix A).

Region of the Country

When literacy and grade-level achievement distributions are compared by four geographical regions of the United States (1) California, (2) Texas, (3) the Southwest, and (4) the Northwest (i.e, the greater Chicago area),[1] the Southwest has the highest

[1] Given the population imbalance between these regions, the sample is not proportionate. For example, about 44% of the sample was drawn from California compared to less than 6% for the Northwest (i.e., the Chicago area). Thus, smaller numbers, particularly for the Northwest, should be kept in mind when these results are being compared.

biliterates (25.3%; n = 40). California has the second highest percentage of the English literacy group (31.9%; n = 135), while the Northwest has the second highest percentage of biliterates. The Northwest has the highest percentage of the Spanish literacy group (42.6%; n = 23) followed by California (25.3%; n = 107). Texas has the highest percentage of the non-functionally literate group (31.4%; n = 103) followed by California (25.3%; n = 92). Overall, Texas and the Northwest tended to have lower levels of English literacy and biliteracy. Results for Table 4-4 were significant, $\chi^2(9, n = 963) = 44.18638$, $p < .05$.

TABLE-4-4

BILITERACY BY REGION OF THE USA

BILIT4	V4 CALIF (1)	TEXAS (2)	SWEST (3)	NWEST (4)	ROW TOTAL
1.00 ENGLISH LITERATE	135	92	69	9	305
	44.3	30.2	22.6	3.0	31.7
	31.9	28.0	43.7	16.7	
	14.0	9.6	7.2	.9	
2.00 BILITERATE	74	68	40	12	194
	38.1	35.1	20.6	6.2	20.1
	17.5	20.7	25.3	22.2	
	7.7	7.1	4.2	1.2	
3.00 SPANISH LITERATE	107	65	19	23	214
	50.0	30.4	8.9	10.7	22.2
	25.3	19.8	12.0	42.6	
	11.1	6.7	2.0	2.4	
4.00 LIM OR NON-LIT	107	103	30	10	250
	42.8	41.2	12.0	4.0	26.0
	25.3	31.4	19.0	18.5	
	11.1	10.7	3.1	1.0	
COLUMN TOTAL	423	328	158	54	963
	43.9	34.1	16.4	5.6	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
44.18638	9	0.0000	10.879	NONE

NUMBER OF MISSING OBSERVATIONS = 28

Country of Birth

Since language of literacy is strongly associated with nativity (given that schooling is associated with literacy and the language of schooling, e.g., in the U.S. is English), a higher proportion of English literacy can be expected among those born in the United States, and, conversely, a higher percentage of the Spanish literacy may be expected among those born in Mexico. However, the picture for biliterates and for those with limited or non-literacy is not as easily predicted since a high proportion of the U.S.-born population is bilingual.

Table 4-5 indicates--as expected--that English and Spanish literacy demonstrate a strong association with nativity. Forty-nine percent (n = 290) of those born in the United States indicate functional English literacy abilities, and 51% (n = 188) of those born in Mexico indicate functional Spanish literacy abilities. However, functional biliteracy is more strongly associated with U.S. nativity than with Mexican nativity. Twenty-five (n = 148) percent of those born in the U.S. report biliterate abilities compared to less than 13% (n = 46) of those born in Mexico. Nearly one-third (32.2%; n = 46) of those born in Mexico are non-functionally literate compared to 22% (n = 131) for those born in the United States. Results were significant, $\chi^2(3, n = 963) = 393.12627$, $p < .05$.

TABLE 4-5

BILITERACY BY NATIVITY

BILIT4	R476 U.S. (1.00)	R476 MEXICO (2.00)	ROW TOTAL
1.00 ENGLISH LITERATE	290	15	305
ROW PCT	95.1	4.9	31.7
COL PCT	48.7	4.1	
TOT PCT	30.1	1.6	
2.00 BILTERATE	148	46	194
ROW PCT	76.3	23.7	20.1
COL PCT	24.9	12.5	
TOT PCT	15.4	4.8	
3.00 SPANISH LITERATE	26	188	214
ROW PCT	12.1	87.9	22.2
COL PCT	4.4	51.1	
TOT PCT	2.7	19.5	
4.00 LIM OR NON-LIT	131	119	250
ROW PCT	52.4	47.6	26.0
COL PCT	22.0	32.3	
TOT PCT	13.6	12.4	
COLUMN TOTAL	595	368	963
	61.8	38.2	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
393.12627	3	0.0000	74.135	NONE

NUMBER OF MISSING OBSERVATIONS = 28

Males and Females Compared

Limited and non-literacy is roughly proportionate among males and females. About one-fourth of the men (26%; n = 98) and women (26.3%; n = 152) were non-functionally literate. Biliteracy profiles are also similar for men and women with approximately one-fifth of each group (19%; n = 74, and 21%; n = 120, respectively) indicating that they are literate in both English and Spanish. English literacy is slightly more common among women (33.9%; n = 196) than among men (28.4%; n = 109). Conversely, men (26.8%; n = 103) are slightly more likely to report Spanish literacy characteristics than women (19.2%; n = 111). Results were significant, $\chi^2(3, n = 963) = 8.55132$, $p < .05$ (Table 4-6).

TABLE 4-6

BILITERACY BY SEX

BILIT4	V462 MALE (1)	V462 FEMALE (2)	ROW TOTAL
1.00 ENGLISH LITERATE	109	196	305
	35.7	64.3	31.7
	28.4	33.9	
	11.3	20.4	
2.00 BILTERATE	74	120	194
	38.1	61.9	20.1
	19.3	20.7	
	7.7	12.5	
3.00 SPANISH LITERATE	103	111	214
	48.1	51.9	22.2
	26.8	19.2	
	10.7	11.5	
4.00 LIM OR NON-LIT	98	152	250
	39.2	60.8	26.0
	25.5	26.3	
	10.2	15.8	
COLUMN TOTAL	384	579	963
	39.9	60.1	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
8.55132	3	0.0359	77.358	NONE

Age Groups Compared

Associations of literacy with age are somewhat mixed. To explore the relationship between age and literacy, respondents were grouped into six age categories: (a) 18 to 25, (b) 26 to 35, (c) 36 to 45, (d) 46 to 55, (e) 56 to 65, and (f) over 66 years of age. Although differences among the groups are interesting in their own right, greater attention here is directed at the question of whether there is a general tendency for literacy or schooling to be associated with younger or more senior groups (Table 4-7).[2]

The age group showing the highest level of English literacy (of 39%; n = 124) was the 26 to 35 years of age group. For those between the ages of 18 and 45, there was only slight variation. However, beginning with the 46 to 55 age group, the percentage of English literacy drops to 24% (n = 34) and continues to drop to a low of 13% (n = 9) for the most senior group (Table 4-7).

The variation is not as great for the proportion of biliterates relative to each age group. The range for each age group varied from a low of 17% (n = 12) for those 66 years of age and older, to a high of 26% (n = 21) for those 56 to 65 years of age. There was no consistent pattern of variation for biliteracy based upon age groups.

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[2]These results must be considered preliminary. Further analysis is needed using smaller age group increments. It should also be noted that numbers are highly disproportionate (ranging from a low of 70 for the 66 and older group to a high of 315 for the 26 to 35 year old group).

Similarly, the variation was not as great for Spanish literacy across age groups. The range was from 16% (n = 22 for those 46 to 55) to 26% (n = 38 for those 18 to 25). Again, there was no consistent pattern of variation for those younger versus those more senior. There was, however, a stronger association between age group and non-functional literacy. The range was from 16% (n = 33 for those 36 to 45) compared to nearly 46% (n = 32) for those 66 or more years of age. Results were significant, $\chi^2(15, n = 956) = 78.60969$, $p < .05$ (Table 4-7).

TABLE 4-7

BILITERACY BY AGE

BILIT4	R469 COUNT / ROW PCT / COL PCT / TOT PCT	18-25 (1.00)	26-35 (2.00)	36-45 (3.00)	46-55 (4.00)	56-65 (5.00)	66 & OLDER (6.00)	ROW TOTAL
1.00 ENGLISH LITERATE	COUNT	51	124	74	34	11	9	303
	ROW PCT	16.8	40.9	24.4	11.2	3.6	3.0	31.7
	COL PCT	34.2	39.4	36.8	24.1	13.8	12.9	
	TOT PCT	5.3	13.0	7.7	3.6	1.2	.9	
2.00 BILTERATE	COUNT	31	54	43	30	21	12	191
	ROW PCT	16.2	28.3	22.5	15.7	11.0	6.3	20.0
	COL PCT	20.8	17.1	21.4	21.3	26.3	17.1	
	TOT PCT	3.2	5.6	4.5	3.1	2.2	1.3	
3.00 SPANISH LITERATE	COUNT	38	73	51	22	13	17	214
	ROW PCT	17.8	34.1	23.8	10.3	6.1	7.9	22.4
	COL PCT	25.5	23.2	25.4	15.6	16.3	24.3	
	TOT PCT	4.0	7.6	5.3	2.3	1.4	1.8	
4.00 LIM OR NON-LIT	COUNT	29	64	33	55	35	32	248
	ROW PCT	11.7	25.8	13.3	22.2	14.1	12.9	25.9
	COL PCT	19.5	20.3	16.4	39.0	43.8	45.7	
	TOT PCT	3.0	6.7	3.5	5.8	3.7	3.3	
COLUMN TOTAL	COUNT	149	315	201	141	80	70	956
	PCT	15.6	32.9	21.0	14.7	8.4	7.3	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
78.60969	15	0.0000	13.985	NONE

NUMBER OF MISSING OBSERVATIONS = 35

Age of Immigration

The data strongly suggest--as expected--that age is more of a factor when it is associated with nativity/immigration. For example, whereas 63% (n = 227) of the Mexican-born indicated that they immigrated at ages nineteen and older (i.e., after the age most students have left high school), only 6% (n = 23) immigrated at the ages of five years or less (i.e., those who would have attended grade school only in this country). Among those who immigrated after the age of eighteen, 62% (n = 140) were Spanish literate, 7% (n = 15) were biliterate, 1% (n = 3) were English literate, and 30% were non-functionally literate. Results were significant, $\chi^2(15, n = 362) = 108.11118$, $p < .05$; the lesser number of cases was expected given the control for nativity (Table 4-8).

TABLE 4-8

BILITERACY BY
AGE OF IMMIGRATION (MEXICAN-BORN)

BILIT4	R1550 1.00 5 OR LESS	2.00 6 TO 8 YEARS	3.00 9 TO 11 YEARS	4.00 12 TO 15 YEARS	5.00 16 TO 18 YEARS	6.00 19 OR OVER	ROW TOTAL
1.00 ENGLISH LITERATE	5	3	3	1		3	15
	33.3	20.0	20.0	6.7		20.0	4.1
	21.7	30.0	25.0	3.3		1.3	
	1.4	.8	.8	.3		.8	
2.00 BILTERATE	5	3	5	11	7	15	46
	10.9	6.5	10.9	23.9	15.2	32.6	12.7
	21.7	30.0	41.7	36.7	11.7	6.6	
	1.4	.8	1.4	3.0	1.9	4.1	
3.00 SPANISH LITERATE	4		1	10	30	140	185
	2.2		.5	5.4	16.2	75.7	51.1
	17.4		8.3	33.3	50.0	61.7	
	1.1		.3	2.8	8.3	38.7	
4.00 LIM OR NON-LIT	9	4	3	8	23	69	116
	7.8	3.4	2.6	6.9	19.8	59.5	32.0
	39.1	40.0	25.0	26.7	38.3	30.4	
	2.5	1.1	.8	2.2	6.4	19.1	
COLUMN TOTAL	23	10	12	30	60	227	362
	6.4	2.8	3.3	8.3	16.6	62.7	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
108.11118	15	0.0000	0.414	11 OF 24 (45.8%)

NUMBER OF MISSING OBSERVATIONS = 629

Parents' Level of Education

The relationship between parental levels of education and literacy is generally evident (despite the fact that the educational attainment of the respondents' parents is generally low). Nearly 61% (n = 465) of the sample reported that their fathers had completed less than six years of schooling, and 58% (n = 469) that their mothers had completed less than six years. Only 9% of the respondents' fathers (n = 70) and mothers (n = 69) had completed more than twelve years of schooling. However, the amount of parental schooling did demonstrate a strong association with the respondents' language of literacy, and level of literacy (Tables 4-9 and 4-10).

For example, while 45% (n = 113) of the English literacy group indicated that their fathers had completed less than six years of schooling, 71% (n = 123) of the Spanish literacy group and over 84% (n = 148) of those with limited or no literacy abilities indicated the same (Table 4-9).[3] The results are even more varied when comparisons are made based upon the respondent's mother's (Table 4-10) level of education. Only 36% (n = 98) of the English literacy group's mothers had failed to complete six years of schooling compared to nearly 86% (n = 166) for the limited or non-literacy group.[4]

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[3] Results were significant, $\chi^2(6, n = 767) = 86.57161$, $p < .05$; the number of missing cases is higher than expected.

[4] Results were significant, $\chi^2(6, n = 813) = 138.37236$, $p < .05$; the

TABLE 4-9

BILITERACY BY FATHER'S LEVEL OF SCHOOLING

BILIT4	V1536 LESS THAN 6 YEARS	6 TO 11 YEARS	MORE THAN 12 YEARS	ROW TOTAL
1.00 ENGLISH LITERATE	113	107	33	253
	44.7	42.3	13.0	33.0
	24.3	46.1	47.1	
	14.7	14.0	4.3	
2.00 BILTERATE	81	61	23	165
	49.1	37.0	13.9	21.5
	17.4	26.3	32.9	
	10.6	8.0	3.0	
3.00 SPANISH LITERATE	123	41	9	173
	71.1	23.7	5.2	22.6
	26.5	17.7	12.9	
	16.0	5.3	1.2	
4.00 LIM OR NON-LIT	148	23	5	176
	84.1	13.1	2.8	22.9
	31.8	9.9	7.1	
	19.3	3.0	.7	
COLUMN TOTAL	465	232	70	767
	60.6	30.2	9.1	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
86.57161	6	0.0000	15.059	NONE

NUMBER OF MISSING OBSERVATIONS = 224

TABLE 4-10

BILITERACY BY MOTHER'S LEVEL OF EDUCATION

BILIT4	V1539 LESS THAN 6 YEARS 1	6 TO 11 YEARS 2	MORE THAN 12 YEAR 3	ROW TOTAL
1.00 ENGLISH LITERATE	98	133	39	270
	36.3	49.3	14.4	33.2
	20.9	48.4	56.5	
	12.1	16.4	4.8	
2.00 BILTERATE	78	67	22	167
	46.7	40.1	13.2	20.5
	16.6	24.4	31.9	
	9.6	8.2	2.7	
3.00 SPANISH LITERATE	127	51	4	182
	69.8	28.0	2.2	22.4
	27.1	18.5	5.8	
	15.6	6.3	.5	
4.00 LIM OR NON-LIT	166	24	4	194
	85.6	12.4	2.1	23.9
	35.4	8.7	5.8	
	20.4	3.0	.5	
COLUMN TOTAL	469	275	69	813
	57.7	33.8	8.5	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
138.37236	6	0.0000	14.173	NONE

NUMBER OF MISSING OBSERVATIONS = 178

INCOME, EMPLOYMENT, AND SOCIAL CLASS IDENTIFICATION

Family Income

The relationship between literacy and income is profiled in Table 4-11 and Table 4-12. Table 4-11 indicates that only 15% of the sample indicated family incomes of more than $20,000 per year. Twenty-five percent (n = 74) of the English literacy group reported family incomes of more than $20,000 per year compared to 19% (n = 35) for biliterates, 9% for Spanish literates and only 5% (n = 11) for the non-functionally literate group. While literacy appears to be strongly associated with income, family income, in particular, is quite low compared to the national average for 1979. Among the English literacy group, 39% (n =113) reported family incomes below $10,000; 43% (n = 80) of the biliterates, 61% (n = 119) of the Spanish literacy group, and 68% (n = 181) of the non-functionally literate were also below $10,000 in family income. Results for Table 4-11 were significant, $\chi^2(6, n = 896) = 74.23229$, $p < .05$; the amount of missing data is greater than expected.

Mean incomes are summarized in Table 4-12. English literates reported the highest mean family income at $10,205 (n = 224), followed by biliterates at $9,626 (n = 187), then by Spanish literates at $7,913 (n = 195), and by those non-functionally

literate at $6,748 (n = 222). All Chicano literacy groups were substantially below the national family income mean of $17,640 for the year 1978 (*Statistical Abstract of the United States*, 1980).

TABLE 4-11

BILITERACY BY FAMILY INCOME

R1253

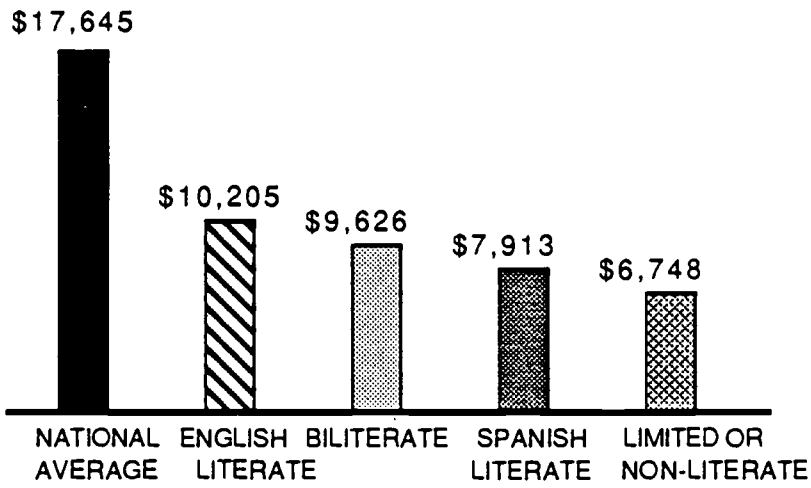
BILIT4	UNDER $10000 (1.00)	$10000-$19999 (2.00)	$20000 & ABOVE (3.00)	ROW TOTAL
1.00 ENGLISH LITERATE	113	105	74	292
ROW PCT	38.7	36.0	25.3	32.6
COL PCT	24.4	35.5	54.0	
TOT PCT	12.6	11.7	8.3	
2.00 BILITERATE	80	72	35	187
ROW PCT	42.8	38.5	18.7	20.9
COL PCT	17.3	24.3	25.5	
TOT PCT	8.9	8.0	3.9	
3.00 SPANISH LITERATE	119	59	17	195
ROW PCT	61.0	30.3	8.7	21.8
COL PCT	25.7	19.9	12.4	
TOT PCT	13.3	6.6	1.9	
4.00 LIM OR NON-LIT	151	60	11	222
ROW PCT	68.0	27.0	5.0	24.8
COL PCT	32.6	20.3	8.0	
TOT PCT	16.9	6.7	1.2	
COLUMN TOTAL	463	296	137	896
	51.7	33.0	15.3	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
74.23229	6	0.0000	28.593	NONE

NUMBER OF MISSING OBSERVATIONS = 95

TABLE 4-12

MEAN FAMILY INCOME
BY LITERACY CHARACTERISTICS FOR 1978



Employment

In terms of employment, generally, biliterates appear to have an edge over the English literacy and Spanish literacy groups (Table 4-13). Sixty-eight percent (n = 132) of the biliterates reported that they were currently employed compared to 62% (n = 189) for the English literacy group and 51% (n = 110) for the Spanish literacy group. Literacy in any language made a significant difference; only 39% (n = 97) of the non-functionally

literate group reported that they were currently employed. Results using Chi-square for Table 4-13 were significant, $\chi^2(3, \underline{n} = 963) = 46.49816$, $\underline{p} < .05$.

For those not employed, in response to the question of whether they had ever worked for pay, eighty-nine percent ($\underline{n}$ = 32) of the biliterates and 83% ($\underline{n}$ = 54) of the English literacy group indicated that they had been employed for pay compared to 76% ($\underline{n}$ = 55) for those of the Spanish literacy group and only 69% ($\underline{n}$ = 72) for the non-functionally literate group. Results using Chi-square for Table 4-14 were significant; $\chi^2(3, \underline{n} = 276) = 7.81876$, $\underline{p} < .05$ The smaller number of cases was expected.

English literates and biliterates also appear to have been more likely to have worked during the previous two years (i.e., 1977-1978). However, results using Chi-square for Table 4-15 were not significant; $\chi^2(3, \underline{n} = 435) = 5.91754$, $\underline{p} > .05$. The smaller number of cases was expected.

Literacy also appears to be associated with the motivation to work for those unemployed. Sixty-seven percent ($\underline{n}$ = 69) of the unemployed English literates expressed a desire to work compared to 48% ($\underline{n}$ = 28) for the biliterates, 33% ($\underline{n}$ = 29) for the Spanish literates, and 49% ($\underline{n}$ = 58) for the limited or non-literates. Results using Chi-square for Table 4-16 were significant; $\chi^2(3, \underline{n} = 366) = 21.65245$, $\underline{p} < .05$. The smaller number of cases was expected.

TABLE 4-13

BILITERACY BY CURRENTLY EMPLOYED

BILIT4	V319 YES (1)	V319 NO (5)	ROW TOTAL
1.00 ENGLISH LITERATE	189	116	305
	62.0	38.0	31.7
	35.8	26.7	
	19.6	12.0	
2.00 BILTERATE	132	62	194
	68.0	32.0	20.1
	25.0	14.3	
	13.7	6.4	
3.00 SPANISH LITERATE	110	104	214
	51.4	48.6	22.2
	20.8	23.9	
	11.4	10.8	
4.00 LIM OR NON-LIT	97	153	250
	38.8	61.2	26.0
	18.4	35.2	
	10.1	15.9	
COLUMN TOTAL	528	435	963
	54.8	45.2	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
46.89816	3	0.0000	87.632	NONE

STATISTIC	VALUE	SIGNIFICANCE

NUMBER OF MISSING OBSERVATIONS = 28

TABLE 4-14

BILITERACY BY EVER WORKED FOR PAY

BILIT4	V321 YES	V321 NO	ROW TOTAL
1.00 ENGLISH LITERATE	54	11	65
COUNT	54	11	65
ROW PCT	83.1	16.9	23.6
COL PCT	25.4	17.5	
TOT PCT	19.6	4.0	
2.00 BILTERATE	32	4	36
COUNT	32	4	36
ROW PCT	88.9	11.1	13.0
COL PCT	15.0	6.3	
TOT PCT	11.6	1.4	
3.00 SPANISH LITERATE	55	16	71
COUNT	55	16	71
ROW PCT	77.5	22.5	25.7
COL PCT	25.8	25.4	
TOT PCT	19.9	5.8	
4.00 LIM OR NON-LIT	72	32	104
COUNT	72	32	104
ROW PCT	69.2	30.8	37.7
COL PCT	33.8	50.8	
TOT PCT	26.1	11.6	
COLUMN TOTAL	213	63	276
	77.2	22.8	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
7.81876	3	0.0499	8.217	NONE

NUMBER OF MISSING OBSERVATIONS = 715

TABLE 4-15

BILITERACY BY WORKED IN 1977-1978

BILIT4	V320 YES (1)	V320 NO (5)	ROW TOTAL
1.00 ENGLISH LITERATE	51	65	116
	44.0	56.0	26.7
	32.1	23.6	
	11.7	14.9	
2.00 BILTERATE	26	36	62
	41.9	58.1	14.3
	16.4	13.0	
	6.0	8.3	
3.00 SPANISH LITERATE	33	71	104
	31.7	68.3	23.9
	20.8	25.7	
	7.6	16.3	
4.00 LIM OR NON-LIT	49	104	153
	32.0	68.0	35.2
	30.8	37.7	
	11.3	23.9	
COLUMN TOTAL	159	276	435
	36.6	63.4	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
5.91754	3	0.1157	22.662	NONE

NUMBER OF MISSING OBSERVATIONS = 556

TABLE 4-16

BILITERACY BY WANTED TO WORK SINCE UNEMPLOYED

BILIT4	COUNT / ROW PCT / COL PCT / TOT PCT	V330 YES	V330 NO	ROW TOTAL
1.00 ENGLISH LITERATE		69	34	103
		67.0	33.0	28.1
		37.5	18.7	
		18.9	9.3	
2.00 BILTERATE		28	30	58
		48.3	51.7	15.8
		15.2	16.5	
		7.7	8.2	
3.00 SPANISH LITERATE		29	58	87
		33.3	66.7	23.8
		15.8	31.9	
		7.9	15.8	
4.00 LIM OR NON-LIT		58	60	118
		49.2	50.8	32.2
		31.5	33.0	
		15.8	16.4	
COLUMN TOTAL		184	182	366
		50.3	49.7	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
21.65245	3	0.0001	28.842	NONE

NUMBER OF MISSING OBSERVATIONS = 625

NATURALIZATION AND POLITICAL PARTICIPATION

The Decision to Become a U.S. Citizen

Table 4-17 describes the relationship between literacy characteristics and the desire of those born in Mexico to become United States citizens. The results, however, were not particularly informative, since only six respondents were literate English only, and since only 26 were biliterate (out of 246). Eighty-three percent (n = 5) of the English literacy group indicated that they planned to naturalize in the future compared to only 50% (n = 13) of the biliterates, 52% (n = 71) of the Spanish literacy group and only 48% (n = 37) of the non-functionally literate group. Results using Chi-square for Table 4-17 were not significant; $\chi^2(6, n = 246) = 6.38474$, $p > .05$. The smaller number of cases was expected.

It should be noted that this question was asked prior to the opportunity for amnesty for some undocumented persons during the Reagan Administration. Results might have been generally more positive had the option been available at the time the NCS was conducted.

TABLE 4-17

BILITERACY BY DESIRE TO NATURALIZE IN THE FUTURE

BILIT4	V1564 YES (1)	NO (5)	DON'T KNOW (8)	ROW TOTAL
1.00 ENGLISH LITERATE	5		1	6
	83.3		16.7	2.4
	4.0		5.9	
	2.0		.4	
2.00 BILTERATE	13	10	3	26
	50.0	38.5	11.5	10.6
	10.3	9.7	17.6	
	5.3	4.1	1.2	
3.00 SPANISH LITERATE	71	57	9	137
	51.8	41.6	6.6	55.7
	56.3	55.3	52.9	
	28.9	23.2	3.7	
4.00 LIM OR NON-LIT	37	36	4	77
	48.1	46.8	5.2	31.3
	29.4	35.0	23.5	
	15.0	14.6	1.6	
COLUMN TOTAL	126	103	17	246
	51.2	41.9	6.9	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
6.38474	6	0.3815	0.415	4 OF 12 (33.3%)

NUMBER OF MISSING OBSERVATIONS = 86

Political Participation

The relationship between literacy, schooling, and political participation is explored based upon whether Chicanos eligible to vote were in fact registered at the time of the survey, and whether (if registered) they did in fact vote in the 1976 Presidential election.

Across the sample as a whole, among those eligible to vote, 62% were registered. Nearly 70% (n = 105) of the biliterates were registered compared to 65% (n = 20) for the Spanish literacy group and 64% (n = 175) for the English literacy group. Only 44% (n = 51) of the non-functionally literate group were registered to vote. Results using Chi-square for Table 4-18 were significant; $\chi^2(3, n = 570) = 19.32114$, $p < .05$. The smaller number of cases was expected.

In terms of actually voting in the previous presidential election, among those registered, a higher proportion of biliterates voted, 66% (n = 97), compared to 58% (n = 153) for the English literacy group. Only 34% (n = 19) of the Spanish literacy group and 35% (n = 46) of the non-functionally literate voted (Table 4-18). Biliteracy appears to be a positive characteristic relative to voting behavior; however, Spanish literacy does not (which is interesting given the availability of bilingual voting materials and ballots in communities of high Spanish-language concentration).

Results using Chi-square for Table 4-19 were significant; $\chi^2(3, \underline{n} = 599) = 38.61049$, $\underline{p} < .05$. The smaller number of cases was expected.

TABLE 4-18

BILITERACY BY REGISTERED TO VOTE

BILIT4	COUNT / ROW PCT / COL PCT / TOT PCT	V1063 YES (1)	V1063 NO (5)	ROW TOTAL
1.00 ENGLISH LITERATE		175	98	273
		64.1	35.9	47.9
		49.9	44.7	
		30.7	17.2	
2.00 BILTERATE		105	46	151
		69.5	30.5	26.5
		29.9	21.0	
		18.4	8.1	
3.00 SPANISH LITERATE		20	11	31
		64.5	35.5	5.4
		5.7	5.0	
		3.5	1.9	
4.00 LIM OR NON-LIT		51	64	115
		44.3	55.7	20.2
		14.5	29.2	
		8.9	11.2	
COLUMN TOTAL		351	219	570
		61.6	38.4	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
19.32114	3	0.0002	11.911	NONE

NUMBER OF MISSING OBSERVATIONS = 75

TABLE 4-19

BILITERACY BY VOTED IN 1976

BILIT4	V1060 YES (1)	V1060 NO (5)	ROW TOTAL
1.00 ENGLISH LITERATE	153	109	262
ROW PCT	58.4	41.6	43.7
COL PCT	48.6	38.4	
TOT PCT	25.5	18.2	
2.00 BILTERATE	97	51	148
ROW PCT	65.5	34.5	24.7
COL PCT	30.8	18.0	
TOT PCT	16.2	8.5	
3.00 SPANISH LITERATE	19	37	56
ROW PCT	33.9	66.1	9.3
COL PCT	6.0	13.0	
TOT PCT	3.2	6.2	
4.00 LIM OR NON-LIT	46	87	133
ROW PCT	34.6	65.4	22.2
COL PCT	14.6	30.6	
TOT PCT	7.7	14.5	
COLUMN TOTAL	315	284	599
	52.6	47.4	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
38.61049	3	0.0000	26.551	NONE

NUMBER OF MISSING OBSERVATIONS = 18

TABLE 4-20

BILITERACY BY SUPPORT A POLITICAL PARTY

BILIT4	V1064 NONE 0	DEMOCRAT 1	REPUB-LICAN 2	INDEPEND-ENT 3	ROW TOTAL
1.00 ENGLISH LITERATE	25	197	23	8	253
ROW PCT	9.9	77.9	9.1	3.2	48.1
COL PCT	42.4	48.8	50.0	47.1	
TOT PCT	4.8	37.5	4.4	1.5	
2.00 BILTERATE	9	116	13	6	144
ROW PCT	6.3	80.6	9.0	4.2	27.4
COL PCT	15.3	28.7	28.3	35.3	
TOT PCT	1.7	22.1	2.5	1.1	
3.00 SPANISH LITERATE	5	22	1	1	29
ROW PCT	17.2	75.9	3.4	3.4	5.5
COL PCT	8.5	5.4	2.2	5.9	
TOT PCT	1.0	4.2	.2	.2	
4.00 LIM OR NON-LIT	20	69	9	2	100
ROW PCT	20.0	69.0	9.0	2.0	19.0
COL PCT	33.9	17.1	19.6	11.8	
TOT PCT	3.8	13.1	1.7	.4	
COLUMN TOTAL	59	404	46	17	526
	11.2	76.8	8.7	3.2	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
14.33499	9	0.1109	0.937	5 OF 16 (31.3%)

NUMBER OF MISSING OBSERVATIONS = 91

The data for the relationship between literacy and support for a political party indicated that 80% (n = 80) of the non-functionally literate group reported affiliation compared to 83% (n = 24) for those for the Spanish literacy group, 90% (n = 228) for the English literacy group and 94% (n = 135) for biliterates. Results using Chi-square for Table 4-20 were not significant; $\chi^2(3, n = 599) = 38.61049$, $p > .05$. The smaller number of cases was expected.

LANGUAGE AND LITERACY

Since language factors have been identified as having perhaps the strongest relationship with literacy (Ortiz, 1987), it is important to look at several types of language use and background comparisons. These are: (1) the language profile of the respondents with respect to bilingualism and language of dominance, (2) the language used at home as a child, and (3) the language used in the interview, which serves as a direct indication of language preference when an overt opportunity for choice is presented.

Bilingualism and Language of Dominance

For the purpose of crosstabulating literacy data with language characteristics, respondents were grouped into three categories: (1) English dominant, (2) Spanish dominant, and (3) bilingual. Since the majority of those surveyed are bilingual, language dominance provides a more useful basis for summary comparison than monolingual versus bilingual and partial bilingual.

Table 4-21 presents an overview of the relationship between oral language dominance and literacy across English and Spanish. A strong relationship between one's dominant oral language(s) and one's dominant language(s) of literacy may be expected, and the data support this. For example, 84% (n = 106) of those who are English dominant or monolingual are among the English literacy. This compares to only 4% (n = 16) for those who speak only or mostly Spanish, and to approximately 40% (n = 182) for those who are bilingual. Among those who are Spanish dominant or monolingual, 51% (n = 196) also indicate Spanish literacy characteristics. This compares to none among the English dominant or monolingual group and to only 4% (n = 18) among the bilingual group. Among bilinguals, nearly 39% (n = 175) are fully biliterate compared to only 5% (n = 6) for those who are English

dominant and 3% ($\underline{n}$ = 13) for those who are Spanish dominant. Results using Chi-square for Table 4-21 were significant; $\chi^2(6, \underline{n} = 960) = 652.22936$, $\underline{p} < .05$.

TABLE 4-21

BILITERACY BY BILINGUALISM

BILIT4	BILING3 1.00 ENG MONO OR DOM	2.00 SPN MONO OR DOM	3.00 BILINGUAL	ROW TOTAL
1.00 ENGLISH LITERATE	106	16	182	304
	34.9	5.3	59.9	31.7
	83.5	4.2	40.3	
	11.0	1.7	19.0	
2.00 BILTERATE	6	13	175	194
	3.1	6.7	90.2	20.2
	4.7	3.4	38.7	
	.6	1.4	18.2	
3.00 SPANISH LITERATE		196	18	214
		91.6	8.4	22.3
		51.4	4.0	
		20.4	1.9	
4.00 LIM OR NON-LIT	15	156	77	248
	6.0	62.9	31.0	25.8
	11.8	40.9	17.0	
	1.6	16.3	8.0	
COLUMN TOTAL	127	381	452	960
	13.2	39.7	47.1	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
652.22936	6	0.0000	25.665	NONE

NUMBER OF MISSING OBSERVATIONS = 31

The Relationship Between Oral Ability and Reading and Writing

Since oral conversational abilities have been seen as having a strong relationship with literacy (Olson, 1982, 1977), oral conversation language abilities were correlated with reading and writing abilities. However, since these findings are based upon self-reported data, it is likely that the assessments are influenced by the respondents' self-perceptions of the status of their speech varieties. In any event, the findings (based upon Kendall's Tau) indicate that the relationship between oral performance and literacy was higher for English reading (t = .7904, n = 969, $p <$ .05) and writing abilities (t = .7614, n = 968, $p <$ .05) than is the case for Spanish reading (t = .3872, n = 963, $p <$ .05), and Spanish writing (t = .3097, n = 963, $p <$ .05).

Since, literacy skills for Spanish are less frequently formally taught than are those for English in this country, it is also understandable that reports for Spanish literacy skills are generally lower than for English. This, together with generally lower educational achievement for the predominantly Spanish-speaking Mexican-born population, may help to explain the wider gap between Spanish oral proficiency and Spanish literacy abilities.

Childhood Language Environment

The relationship between literacy and childhood language is illustrated by Table 4-22 which describes home language, and Table 4-23 which describes literacy by language of the neighborhood.

Among the English dominant literate group, over half (51.8%; n = 188) came from homes where only or mostly Spanish was spoken when they were children. Only 23% (n = 69) came from homes where only or mostly English was spoken, and the remainder came from bilingual homes (Table 4-22).[5] A similar pattern holds true between English literacy and language of the neighborhood with half (n = 152) of the English literacy group having lived in neighborhoods that were predominantly Spanish-speaking (Table 4-23).[6] Only one-third (n = 103) came from only or mostly English speaking neighborhoods.

Among biliterates, 84% (n = 163) came from predominantly Spanish-speaking homes (Table 4-22). Seventy-five percent (n = 145) came from only or mostly Spanish-speaking neighborhoods (Table 4-23).

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[5] Results using Chi-square for Table 4-22 were significant; $\chi^2(12, n = 960) = 300.0530$, $p < .05$.

[6] Results using Chi-square for Table 4-23 were significant; $\chi^2(12, n = 960) = 329.72357$ $p < .05$.

All of the Spanish literacy group came from homes in which only or mostly Spanish was spoken (Table 4-22) while 97% (n = 213) came from neighborhoods in which Spanish was the predominant language.

TABLE 4-22

BILITERACY BY CHILDHOOD HOME LANGUAGE

BILIT4	V1428 ENGLISH ONLY (1)	MOSTLY ENGLISH (2)	BOTH EQUALLY (3)	MOSTLY SPANISH (4)	SPANISH ONLY (5)	ROW TOTAL
1.00 ENGLISH LITERATE	17	52	47	107	81	304
	5.6	17.1	15.5	35.2	26.6	31.7
	73.9	75.4	65.3	47.3	14.2	
	1.8	5.4	4.9	11.1	8.4	
2.00 BILTERATE	6	11	14	63	100	194
	3.1	5.7	7.2	32.5	51.5	20.2
	26.1	15.9	19.4	27.9	17.5	
	.6	1.1	1.5	6.6	10.4	
3.00 SPANISH LITERATE				14	199	213
				6.6	93.4	22.2
				6.2	34.9	
				1.5	20.7	
4.00 LIM OR NON-LIT		6	11	42	190	249
		2.4	4.4	16.9	76.3	25.9
		8.7	15.3	18.6	33.3	
		.6	1.1	4.4	19.8	
COLUMN TOTAL	23	69	72	226	570	960
	2.4	7.2	7.5	23.5	59.4	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
300.05530	12	0.0000	4.648	1 OF 20 (5.0%)

NUMBER OF MISSING OBSERVATIONS = 31

TABLE 4-23

BILITERACY BY CHILDHOOD NEIGHBORHOOD LANGUAGE

BILIT4	V1429 1 ONLY ENG	2 MOST ENG EQUALLY	3	4 MOST SPN ONLY SPN	5	ROW TOTAL
1.00 ENGLISH LITERATE	35	68	48	101	51	303
	11.6	22.4	15.8	33.3	16.8	31.7
	71.4	66.0	54.5	43.2	10.6	
	3.7	7.1	5.0	10.6	5.3	
2.00 BILTERATE	10	19	19	70	75	193
	5.2	9.8	9.8	36.3	38.9	20.2
	20.4	18.4	21.6	29.9	15.5	
	1.0	2.0	2.0	7.3	7.8	
3.00 SPANISH LITERATE	1	2	3	19	189	214
	.5	.9	1.4	8.9	88.3	22.4
	2.0	1.9	3.4	8.1	39.1	
	.1	.2	.3	2.0	19.7	
4.00 LIM OR NON-LIT	3	14	18	44	168	247
	1.2	5.7	7.3	17.8	68.0	25.8
	6.1	13.6	20.5	18.8	34.8	
	.3	1.5	1.9	4.6	17.6	
COLUMN TOTAL	49	103	88	234	483	957
	5.1	10.8	9.2	24.5	50.5	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
329.72357	12	0.0000	9.882	NONE

NUMBER OF MISSING OBSERVATIONS = 34

Summary of Childhood Language Environment

Although the majority of those sampled reported coming from environments in which only or mostly Spanish was spoken, there was less of a tendency for the English literacy group to come from Spanish language backgrounds than for biliterates or for the Spanish literacy group. Moreover, there is a greater tendency for the non-functionally literate to come from predominantly Spanish-speaking childhood language environments.

Language Currently Used

The language used in the interview provides a direct indication of language of choice since respondents were asked to choose the language in which the interview and supporting materials were presented. Since all the interviewers were bilingual, and since the average interview was over three hours in length, individuals could easily switch to the language in which they were the most comfortable. The languages actually used for the interviews were roughly proportionate; 44% (n = 425) were conducted only in English, and 46% (n = 449) were conducted only in Spanish; less than 10% (n = 89) were conducted in varying combinations of English and Spanish).

Table 4-24 indicates that of those conducted only in English, 60% (n = 256) reported English literacy compared to only 5% (n = 20) for those conducted in Spanish only. The relationship between language of preference and Spanish literacy was also strong, but not as strong as for English literacy. Forty-five percent (n = 200) of those interviewed in Spanish only indicated Spanish literacy characteristics compared to 1% (n = 5) for those interviewed in English only. Results using Chi-square for Table 4-24 were significant; $\chi^2(12, n = 963) = 502.50120, p < .05$.

TABLE 4-24

BILITERACY BY LANGUAGE USED IN THE INTERVIEW

BILIT4	V7 1 ENGLISH ONLY	2 MOSTLY ENGLISH	3 BOTH	4 MOSTLY SPANISH	5 SPANISH ONLY	ROW TOTAL
1.00 ENGLISH LITERATE	256	11	5	13	20	305
	83.9	3.6	1.6	4.3	6.6	31.7
	60.2	40.7	41.7	26.0	4.5	
	26.6	1.1	.5	1.3	2.1	
2.00 BILTERATE	117	6	4	12	55	194
	60.3	3.1	2.1	6.2	28.4	20.1
	27.5	22.2	33.3	24.0	12.2	
	12.1	.6	.4	1.2	5.7	
3.00 SPANISH LITERATE	5	1		8	200	214
	2.3	.5		3.7	93.5	22.2
	1.2	3.7		16.0	44.5	
	.5	.1		.8	20.8	
4.00 LIM OR NON-LIT	47	9	3	17	174	250
	18.8	3.6	1.2	6.8	69.6	26.0
	11.1	33.3	25.0	34.0	38.8	
	4.9	.9	.3	1.8	18.1	
COLUMN TOTAL	425	27	12	50	449	963
	44.1	2.8	1.2	5.2	46.6	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
502.50102	12	0.0000	2.417	4 OF 20 (20.0%)

NUMBER OF MISSING OBSERVATIONS = 28

Language Background Across English and Spanish by Nativity

Since language of literacy is influenced by language background, and since language background is related to nativity, it is useful to explore the relationship between language and nativity before profiling literacy by nativity. Since Mexico is predominantly a Spanish-speaking nation, and the United States an English-speaking country, nativity can be presumed to have a strong impact on language background and literacy specific to English and Spanish. Yet, while this is generally true, the data also indicate that this is more likely to be true for those born in Mexico than for those born in the United States (given immigration to the United States).

Table 4-25 indicates that while over 99% (n = 126) of the English dominant/English only group were born in the United States, 26% (n = 101) of those of the Spanish dominant/Spanish only group were born in the United States. Despite the fact that the United States-born account for nearly 62% (n = 594) of the sample, only 21% (n = 126) of that group is English dominant. The United States-born Chicano population is predominantly bilingual (61.2%; n = 126), with those dominant in English are in the minority even among those born in this country. Results using Chi-square for Table 4-25 were significant; $\chi^2(2, n = 961) = 349.679$, $p < .05$.

TABLE 4-25

BILINGUALISM BY NATIVITY

BILING3	R476 U.S. (1.00)	R476 MEXICO (2.00)	ROW TOTAL
1.00 ENG MONO OR DOM	126	1	127
	99.2	.8	13.2
	21.2	.3	
	13.1	.1	
2.00 SPN MONO OR DOM	101	281	382
	26.4	73.6	39.8
	17.0	76.6	
	10.5	29.2	
3.00 BILINGUAL	367	85	452
	81.2	18.8	47.0
	61.8	23.2	
	38.2	8.8	
COLUMN TOTAL	594	367	961
	61.8	38.2	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
349.67680	2	0.0000	48.501	NONE

NUMBER OF MISSING OBSERVATIONS = 30

Literacy by Nativity and Language

Tables 4-26[7] and 4-27[8] profile literacy across English and Spanish by nativity. The data indicate that nearly half (48.7%, n = 289; cf., Table 4-26) of those born in the United States report English literacy abilities compared to only 4% (n = 4) for those born in Mexico (Table 4-27). Eighty-four percent of the U.S-born English language dominant group indicated English literacy abilities compared to 46% (n = 4) for bilinguals and only 15% (n = 15) for those dominant in the Spanish language.

Sixty percent of the U.S.-born Spanish dominant group were non-functionally literate compared to only 15% (n = 56) for bilinguals and only 11% (n = 14) for the English dominant group (Table 4-26).

Among the Mexican-born group, 17% (n = 14) of the bilinguals were literate in English compared to only 7% (n = 1) for those dominant in the Spanish language. Predictably, bilinguals also have the edge in biliteracy 46% (n = 39) to 3% (n = 7). However, the Spanish language dominant (63%, n = 177) were

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[7] Results using Chi-square for Table 4-26 were significant; $\chi^2(6, n = 594) = 254.34186, p < .05$. Smaller numbers were expected given the control for nativity.

[8] Results using Chi-square for Table 4-27 were significant; $\chi^2(6, n = 366) = 174.90311, p < .05$. Smaller numbers were expected given the control for nativity.

more likely to have Spanish literacy abilities than bilinguals (13%, n = 11). A slightly higher percentage among the Spanish language dominant group (34%, n = 95) were non-functionally literate than among the bilingual group (25%, n = 21; cf., Table 4-27).

Thus, among the U.S.-born, the Spanish language dominant group had the lowest levels of literacy overall. Of those born in Mexico, bilinguals were more likely to be English literate or biliterate and less likely to be Spanish literate.

TABLE 4-26

BILITERACY BY BILINGUALISM
(CONTROLLING FOR BORN IN THE USA)

BILIT4	BILING3: ENG MONO OR DOM (1.00)	SPN MONO OR DOM (2.00)	BILINGUAL (3.00)	ROW TOTAL
1.00 ENGLISH LITERATE	106	15	168	289
	36.7	5.2	58.1	48.7
	84.1	14.9	45.8	
	17.8	2.5	28.3	
2.00 BILTERATE	6	6	136	148
	4.1	4.1	91.9	24.9
	4.8	5.9	37.1	
	1.0	1.0	22.9	
3.00 SPANISH LITERATE		19	7	26
		73.1	26.9	4.4
		18.8	1.9	
		3.2	1.2	
4.00 LIM OR NON-LIT	14	61	56	131
	10.7	46.6	42.7	22.1
	11.1	60.4	15.3	
	2.4	10.3	9.4	
COLUMN TOTAL	126	101	367	594
	21.2	17.0	61.8	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
254.34186	6	0.0000	4.421	1 OF 12 (8.3%)

NOTE: Since this crosstabulation involves a control for nativity, missing cases are computed for both Tables 4-26 and 4-27; cf., Table 4-27.

TABLE 4-27

BILITERACY BY BILINGUALISM
(CONTROLLING FOR BORN MEXICO)

BILIT4	BILING3 1.00 ENG MONO OR DOM	2.00 SPN MONO OR DOM	3.00 BILINGUAL	ROW TOTAL
1.00 ENGLISH LITERATE		1	14	15
		6.7	93.3	4.1
		.4	16.5	
		.3	3.8	
2.00 BILTERATE		7	39	46
		15.2	84.8	12.6
		2.5	45.9	
		1.9	10.7	
3.00 SPANISH LITERATE		177	11	188
		94.1	5.9	51.4
		63.2	12.9	
		48.4	3.0	
4.00 LIM OR NON-LIT	1	95	21	117
	.9	81.2	17.9	32.0
	100.0	33.9	24.7	
	.3	26.0	5.7	
COLUMN TOTAL	1	280	85	366
	.3	76.5	23.2	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
174.90311	6	0.0000	0.041	5 OF 12 (41.7%)

NUMBER OF MISSING OBSERVATIONS = 31

ATTITUDES TOWARD LANGUAGE, BILINGUALISM, AND BILITERACY

Attitudes Toward Bilingualism and Biliteracy

General attitudes within the Chicano community toward bilingualism and biliteracy are of interest. To probe these attitudes responses from the following language attitude questions were crosstabulated with the biliteracy variable. The first question asked respondents which language (or combination of languages) individuals of Mexican descent should speak in the United States (Table 4-28). The second question asked respondents whether or not there were advantages to being bilingual in the United States (Table 4-29). The third question probed reasons for the advantages of being bilingual (Table 4-30). The fourth question asked whether parents should discourage their children from speaking Spanish (Tables 4-31). The fifth question asked whether children of Mexican descent should learn to speak Spanish (Table 4-31). The last question asked whether children of Mexican descent should learn to read and write in both English and Spanish (Table 4-32).

Only 4% (n = 34) respondents felt that English only should be spoken in the United States by individuals of Mexican descent.

was only 3% (n = 28) . Even among the English literacy group, only 5% (n = 16) advocated the use of only English. Across all groups there was general support for some mixture of English and Spanish, with 96% (n = 917) of the sample supporting some degree of bilingualism. There was, however, more of a tendency for respondents to support the use of mostly English (13.4%, n = 134, compared to 9.6%, n =91, supporting the use of mostly Spanish). Interestingly, the English literacy group was evenly split in support of either mostly English (9%, n = 28) or mostly Spanish (8%, n = 23). The non-functionally literate group was slightly more inclined to support the use of English or mostly English (17%, n = 41, compared to approximately 14%, n = 33 for the use of Spanish for the sample as a whole). The equal use of both English and Spanish was supported by over 71% (n = 671) of the sample with little variation reported across groups. Results using Chi-square for Table 4-28 were significant; $\chi^2(12, n = 951) = 36.20221$, $p < .05$.

Given the general support for the use of both English and Spanish it is not surprising that the great majority of respondents also felt that there were advantages to being bilingual in the United States. Ninety-three percent (n = 878) of the respondents indicated that they felt that there were advantages. There was little variation across groups regardless of level of literacy, or

language of literacy. Results using Chi-square for Table 4-29 were not significant; $x^2(3, n = 945) = 3.66938, p > .05$.

Since most of the respondents felt that there are advantages to being bilingual, the respondents' reasons for those advantages are of interest. Among ten response options, six relate to perceived "personal benefits" such as pride, self-esteem, and improved communication skills. The other four were related to "practical benefits" such as improved social communication, improved employment, and educational opportunities. Practical benefits were chosen more frequently than personal benefits as the respondents' first choice. Improved employment opportunities were the most often selected practical benefit of bilingualism; it was selected by 45% (n = 390) of the respondents.

Improved personal communication was the second most often selected category (and the most frequently selected among the personal benefit options; over 26% (n = 228) selected this option). Improved social communication was the third most often selected option with over 10% (n = 90) of the sample selecting it. In rank order these three choices held constant regardless of the level of literacy or language of literacy although a smaller percentage (38%, n = 79) of the non-functionally literate selected employment benefits as their first choice (compared to 48%, n = 133 for the English literacy group, 44% (n = 79) for the biliterate group, and 49% (n = 99) for the Spanish literacy group). Results using Chi-

square for Table 4-29 were significant; $\chi^2(27, n = 864) = 45.98281$, $p < .05$.

TABLE 4-28

BILITERACY BY LANGUAGE A CHICANO SHOULD SPEAK IN THE USA

BILIT4	V72 ONLY ENGLISH 1	MOSTLY ENGLISH 2	BOTH 3	MOSTLY SPANISH 4	ONLY SPANISH 5	ROW TOTAL
1.00 ENGLISH LITERATE	16	28	230	23	5	302
	5.3	9.3	76.2	7.6	1.7	31.8
	47.1	22.0	34.3	25.3	17.9	
	1.7	2.9	24.2	2.4	.5	
2.00 BILTERATE	3	26	149	11	3	192
	1.6	13.5	77.6	5.7	1.6	20.2
	8.8	20.5	22.2	12.1	10.7	
	.3	2.7	15.7	1.2	.3	
3.00 SPANISH LITERATE	9	32	141	24	6	212
	4.2	15.1	66.5	11.3	2.8	22.3
	26.5	25.2	21.0	26.4	21.4	
	.9	3.4	14.8	2.5	.6	
4.00 LIM OR NON-LIT	6	41	151	33	14	245
	2.4	16.7	61.6	13.5	5.7	25.8
	17.6	32.3	22.5	36.3	50.0	
	.6	4.3	15.9	3.5	1.5	
COLUMN TOTAL	34	127	671	91	28	951
	3.6	13.4	70.6	9.6	2.9	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
36.20221	12	0.0003	5.653	NONE

NUMBER OF MISSING OBSERVATIONS = 40

TABLE 4-29

BILITERACY BY ADVANTAGES TO BILINGUALISM

BILIT4	V73 YES	V73 NO	ROW TOTAL
1.00 ENGLISH LITERATE	277	24	301
	92.0	8.0	31.9
	31.5	35.8	
	29.3	2.5	
2.00 BILTERATE	180	14	194
	92.8	7.2	20.5
	20.5	20.9	
	19.0	1.5	
3.00 SPANISH LITERATE	204	9	213
	95.8	4.2	22.5
	23.2	13.4	
	21.6	1.0	
4.00 LIM OR NON-LIT	217	20	237
	91.6	8.4	25.1
	24.7	29.9	
	23.0	2.1	
COLUMN TOTAL	878	67	945
	92.9	7.1	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
3.66938	3	0.2995	13.754	NONE

NUMBER OF MISSING OBSERVATIONS = 46

TABLE 4-30 (This table continues on the next page)

BILITERACY BY REASONS FOR ADVANTAGES
TO BEING BILINGUAL IN THE USA

BILIT4	COUNT / ROW PCT / COL PCT / TOT PCT	V74 SELF-ESTEEM 10	CULTURE 11	PRIDE 12	COMMUNI-CATION 13	REPUTATION 14
1.00 ENGLISH LITERATE			10 3.6 40.0 1.2	2 .7 33.3 .2	76 27.6 33.3 8.8	
2.00 BILTERATE		2 1.1 40.0 .2	7 3.9 28.0 .8	2 1.1 33.3 .2	58 32.4 25.4 6.7	2 1.1 22.2 .2
3.00 SPANISH LITERATE		1 .5 20.0 .1	3 1.5 12.0 .3	1 .5 16.7 .1	37 18.4 16.2 4.3	4 2.0 44.4 .5
4.00 LIM OR NON-LIT		2 1.0 40.0 .2	5 2.4 20.0 .6	1 .5 16.7 .1	57 27.3 25.0 6.6	3 1.4 33.3 .3
COLUMN TOTAL		5 .6	25 2.9	6 .7	228 26.4	9 1.0

TABLE 4-30 (Continued from previous page)

BILITERACY BY REASONS FOR ADVANTAGES
TO BEING BILINGUAL IN THE USA

	FAMILY ADVANT.	SOCIAL COMMUN.	EMPLOY-MENT	EDU-CATION	GENERAL APPROVAL	ROW TOTAL
	16	23	24	25	28	
ENGLISH LITERATE	1	30	133	12	11	275
	.4	4.4	48.4	31.8	4.0	31.9
	25.0	33.3	34.1	24.0	19.3	
	.1	3.5	15.4	1.4	1.3	
BILTERATE		16	79	6	7	179
		8.9	44.1	3.4	3.9	20.7
		17.8	20.3	12.0	12.3	
		1.9	9.1	.7	.8	
SPANISH LITERATE	1	22	99	11	22	201
	.5	10.9	49.3	5.5	10.9	23.3
	25.0	24.4	25.4	22.0	38.6	
	.1	2.5	11.5	1.3	2.5	
LIM OR NON-LIT	2	22	79	21	17	209
	1.0	10.5	37.8	10.0	8.1	24.2
	50.0	24.4	20.3	42.0	29.8	
	.2	2.5	9.1	2.4	2.0	
	4	90	390	50	57	864
	.5	10.4	45.1	5.8	6.6	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
45.98281	27	0.0128	0.829	16 OF 40 (40.0%)

NUMBER OF MISSING OBSERVATIONS = 127

In response to whether parents should discourage the use of Spanish among their children (Table 4-31),[9] the response was overwhelmingly negative, with 99% (n = 942) indicating that parents should not discourage the use of Spanish.

In response to the question of whether respondents wanted their child to speak Spanish, 99% (n = 940) agreed regardless of literacy (Table 4-32).[10]

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[9] Results using Chi-square for Table 4-31 were not significant; $x^2(3, n = 951) = 2.52179$, $p > .05$.

[10] Results using Chi-square for Table 4-32 were not significant; $x^2(3, n = 940) = 3.91350$, $p > .05$.

TABLE 4-31

BILITERACY BY SHOULD PARENTS DISCOURAGE SPANISH

BILIT4	V81 YES (1)	V81 NO (5)	ROW TOTAL
1.00 ENGLISH LITERATE	4	297	301
	1.3	98.7	31.7
	44.4	31.5	
	.4	31.2	
2.00 BILTERATE	3	189	192
	1.6	98.4	20.2
	33.3	20.1	
	.3	19.9	
3.00 SPANISH LITERATE	1	211	212
	.5	99.5	22.3
	11.1	22.4	
	.1	22.2	
4.00 LIM OR NON-LIT	1	245	246
	.4	99.6	25.9
	11.1	26.0	
	.1	25.8	
COLUMN TOTAL	9	942	951
	.9	99.1	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
2.52179	3	0.4714	1.817	4 OF 8 (50.0%)

NUMBER OF MISSING OBSERVATIONS = 40

TABLE 4-32

BILITERACY BY WANT CHILD TO SPEAK SPANISH

BILIT4	V1497 YES (1)	V1497 NO (5)	ROW TOTAL
1.00 ENGLISH LITERATE	300		300
	100.0		31.9
	32.1		
	31.9		
2.00 BILTERATE	183	2	185
	98.9	1.1	19.7
	19.6	33.3	
	19.5	.2	
3.00 SPANISH LITERATE	209	1	210
	99.5	.5	22.3
	22.4	16.7	
	22.2	.1	
4.00 LIM OR NON-LIT	242	3	245
	98.8	1.2	26.1
	25.9	50.0	
	25.7	.3	
COLUMN TOTAL	934	6	940
	99.4	.6	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
3.91350	3	0.2710	1.181	4 OF 8 (50.0%)

NUMBER OF MISSING OBSERVATIONS = 51

In response to whether parents should encourage their children to learn to read and write in both English and Spanish, approximately 96% (n = 911) of the respondents agreed that parents should. Ninety-one percent (n = 277) of those among the English literacy group agreed. Results using Chi-square for Table 4-33 were significant; $\chi^2(9, n = 953) = 35.0786$, $p < .05$.

TABLE 4-33

BILITERACY BY WANT CHILD TO BE BILITERATE

BILIT4	V1463 STRONGLY AGREE (1)	AGREE (2)	DISAGREE (3)	STRONGLY DISAGREE (4)	ROW TOTAL
1.00 ENGLISH LITERATE	62	215	26	1	304
	20.4	70.7	8.6	.3	31.9
	24.9	32.5	63.4	100.0	
	6.5	22.6	2.7	.1	
2.00 BILTERATE	50	138	5		193
	25.9	71.5	2.6		20.3
	20.1	20.8	12.2		
	5.2	14.5	.5		
3.00 SPANISH LITERATE	76	131	4		211
	36.0	62.1	1.9		22.1
	30.5	19.8	9.8		
	8.0	13.7	.4		
4.00 LIM OR NON-LIT	61	178	6		245
	24.9	72.7	2.4		25.7
	24.5	26.9	14.6		
	6.4	18.7	.6		
COLUMN TOTAL	249	662	41	1	953
	26.1	69.5	4.3	.1	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
35.07863	9	0.0001	0.203	4 OF 16 (25.0%)

NUMBER OF MISSING OBSERVATIONS = 38

Summary: Attitudes Toward Language, Bilingualism, and Biliteracy

The data clearly indicate that the great majority of those surveyed feel that Chicanos should use both English and Spanish and that there are practical as well as personal benefits which result from being bilingual in the United States. The great majority also believe that both bilingualism and biliteracy should be promoted among their children. Moreover, the favorable predisposition of Chicanos toward bilingualism and biliteracy varies little based upon language of literacy, or level of literacy.

ATTITUDES TOWARD EDUCATIONAL ACHIEVEMENT

This section explores attitudes toward educational success. Two issues are of interest: First, what was the general tendency of most respondents toward these questions? Second, are there any significant differences among respondents which can be attributed to either level of literacy, language of literacy?

Respondents were asked two questions of general relevance to educational success and failure. First, they were asked why persons of Mexican origin tend to receive a poor education and

have less employment success (Table 4-34). The response options were: (1) there is "no opportunity" (i.e., blaming external factors); (2) "it is one's own fault" (i.e., blaming one's own group). Next, they were asked why more Chicanos do not go to college (Table 4-35). The response options were primarily between: (1) College is not important; (2) Chicanos lack preparation.

Across the sample responses were nearly evenly divided on why persons of Mexican descent tend to receive poor education. Fifty-one percent tended to indicate that there is no opportunity, while 48% indicated that it is one's own fault; 1% (n = 8) chose other reasons. Interestingly, there was a much greater tendency for biliterates and the English literacy group to select "no opportunity." Over 65% (n = 126) of the biliterates and 56% (n = 171) of the English literacy group selected that response compared to only 46% (n = 98) for the Spanish literacy group and only 37% (n = 93) for the limited and non-literate group. Literacy level did appear to be associated with choices made. Biliterates and English literates were more likely to indicate that lack of opportunity was the major reason why Chicanos receive a poor education (Table 4-34).[11]

Sixteen percent of all respondents indicated that the reason more Chicanos do not attend college is because a college education

[11] Results using Chi-square for Table 4-34 were significant; $x^2(6, n = 958) = 46.11670, p < .05$.

is not important. Nearly three out of five (59.4%; n = 554) indicated that lack of preparation is the reason that more do not attend, and 25% (n = 233) said that there were "other" reasons.

Responses for lack of preparation were roughly consistent across all groups; however, the English literacy and biliterates were slightly more inclined to choose the "not important" category. Seventeen (n = 51) percent of the English literacy dominant group and 21% (n = 40) of the biliterate group chose it compared to only 12% (n = 29) for both those literate in Spanish and the non-functionally literate group. Results using Chi-square for Table 4-35 were not significant; $\chi^2(6, n = 932) = 12.0168$, $p > .05$.

TABLE 4-34

BILITERACY BY REASON CHICANOS RECEIVE A POOR EDUCATION AND LOWER EMPLOYMENT SUCCESS

BILIT4	V1017 LACK OF OPPORTUNITY 1	OWN FAULT 2	OTHER 3	ROW TOTAL
1.00 ENGLISH LITERATE	171	127	5	303
	56.4	41.9	1.7	31.6
	35.0	27.5	62.5	
	17.8	13.3	.5	
2.00 BILTERATE	126	67		193
	65.3	34.7		20.1
	25.8	14.5		
	13.2	7.0		
3.00 SPANISH LITERATE	98	115		213
	46.0	54.0		22.2
	20.1	24.9		
	10.2	12.0		
4.00 LIM OR NON-LIT	93	153	3	249
	37.3	61.4	1.2	26.0
	19.1	33.1	37.5	
	9.7	16.0	.3	
COLUMN TOTAL	488	462	8	958
	50.9	48.2	.8	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
46.14670	6	0.0000	1.612	4 OF 12 (33.3%)

NUMBER OF MISSING OBSERVATIONS = 33

TABLE 4-35

BILITERACY BY REASON CHICANOS
DON'T GO TO COLLEGE

BILIT4	V1020 NOT IMPORTANT 1	NOT PREPARED 2	OTHER 3	ROW TOTAL
1.00 ENGLISH LITERATE	51	172	71	294
ROW PCT	17.3	58.5	24.1	31.5
COL PCT	35.2	31.0	30.5	
TOT PCT	5.5	18.5	7.6	
2.00 BILTERATE	40	112	37	189
ROW PCT	21.2	59.3	19.6	20.3
COL PCT	27.6	20.2	15.9	
TOT PCT	4.3	12.0	4.0	
3.00 SPANISH LITERATE	25	122	59	206
ROW PCT	12.1	59.2	28.6	22.1
COL PCT	17.2	22.0	25.3	
TOT PCT	2.7	13.1	6.3	
4.00 LIM OR NON-LIT	29	148	66	243
ROW PCT	11.9	60.9	27.2	26.1
COL PCT	20.0	26.7	28.3	
TOT PCT	3.1	15.9	7.1	
COLUMN TOTAL	145	554	233	932
	15.6	59.4	25.0	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
12.01268	6	0.0617	29.404	NONE

NUMBER OF MISSING OBSERVATIONS = 59

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

OVERVIEW

This final chapter presents a brief summary review of the problems and issues addressed, the procedures used, and of the major findings. It then presents several general conclusions and recommendations based upon the findings.

SUMMARY

Problem

This dissertation has sought to investigate literacy and educational attainment among the adult Mexican origin population in the United States based upon a secondary data analysis of the 1979 National Chicano Survey (NCS). It has sought to promote the analysis of subgroups, such as Chicanos, to facilitate a better understand of their special needs and characteristics relative to literacy and schooling.

Since there has been a tendency for national surveys to equate literacy with English literacy, this study sought to separate

the general construct from the specific by using a biliteracy analysis of literacy across English and Spanish. An attempt was also made in the review of the literature to link attitudes toward literacy with language attitudes generally.

As indicated in Chapter Two, claims for the cognitive consequences of literacy (i.e., the claims of the "great-divide" view) are tenuous and confounded by a number of factors including literacy practices and language attitudes of dominant groups. Thus, no claims were made in support of the cognitive consequences of literacy, nor were any claims made for the negative cognitive consequences of non-literacy.

The problems of illiteracy and low educational achievement for language minorities generally, and for Chicanos specifically, were outlined. Since it is claimed that non-literacy and lack of adequate literate abilities, together with low educational achievement have negative socioeconomic and political consequences, the study sought to determine to what extent negative consequences were associated with the lack of literacy and undereducational achievement among the Mexican origin population.

Lastly, since Spanish language dominance and bilingualism are prevalent among the Chicano population, an attempt was made to determine the attitudes of Chicanos toward English and Spanish,

bilingualism, biliteracy and bilingual education, especially since such data should be useful from the standpoint of providing input for language and educational planning and policy formation.

Procedure

The study utilized a secondary analysis of the National Chicano Survey (NCS). The relationship between literacy, language, schooling, and other important background factors was explored across English and Spanish. Literacy characteristics were profiled using four different measures of literacy. Then, using a biliteracy variable, the relationships between literacy and relevant background and demographic characteristics such as language abilities, nativity, income, educational achievement, and socio-economic participation were profiled primarily by means of the two measures.

It was argued that since literacy has often been confounded by schooling, and since grade-level achievement is no guarantee of literacy skills mastery, the study should rely more heavily upon self-reported literacy than upon grade-level achievement. However, some grade-level achievement data was used (as a surrogate measure of literacy) primarily to allow findings to be compared by others with surveys such as the U.S. Census. Additional grade-level achievement data has been included in Appendix A.

Attitudes among Chicanos toward language, bilingualism, reasons for educational success or failure were also probed and possible associations between these attitudes and the respondents' levels of education and literacy were explored.

Findings

While self-reported non-literacy/limited literacy was high, the extent of non-literacy/limited literacy was not nearly as prevalent when the distribution of skills was described by the measure of literacy across English and Spanish. Interestingly, the findings based upon the biliteracy variable were generally parallel (the exceptions are noted below) to those utilizing the grade-level achievement surrogate measure (cf., Appendix A). About one-fourth of the sample was non-literate based upon either the biliteracy measure or the grade-level achievement measure. However, two-thirds of the sample was "educationally" disadvantaged.

From a demographic perspective, literacy skills were unevenly distributed across the country. The Northwest (i.e., the greater Chicago area) and Texas generally had the highest rates of non-literacy (and under-educational achievement; cf., Appendix A) while the Southwest, followed by California had the highest levels of literacy (and educational achievement). However, even in these

areas, achievement may be considered low by national standards.

Literacy was also unevenly distributed based upon nativity. Not surprisingly, English literacy was more strongly associated with U.S. nativity and Spanish literacy with Mexican nativity. However, biliteracy was more strongly associated with U.S. nativity, and non-functional literacy in either English or Spanish was more strongly associated with Mexican nativity (as was lower grade-level achievement; cf., Appendix A).

Differences in the literacy characteristics between males and females were generally not significant. However, the disproportionate number of females interviewed, and the higher refusal rate for men make this a tentative conclusion (since it is not known, e.g., if less literate men were more inclined to refuse the interview).

The analysis of age, herein, must be considered preliminary since smaller age-group analysis and further controls for nativity and sex appear to be warranted. However, based upon these data, across age groups, there was generally a tendency for more senior individuals to have higher rates of non-functional literacy than younger individuals (and to have fewer years of schooling; cf., Appendix A). Initial analysis of nativity indicated that a majority (63%; n = 227) of the Mexican-born reported entering this country after the age of 18; (79%; n = 287) entered after the age of mandatory schooling (age 16). Thus, the majority had missed the

opportunity for grade-level schooling in English. Only 8% (n = 18) of the Mexican-born who entered the U.S. after the age of 18 were functionally literate in English, whereas 68% (n = 155) were functionally literate in Spanish.

From the standpoint of "family literacy," while the respondents' parents' levels of education were generally low across the sample, they were lowest for the non-functionally literate, and for those with Spanish literacy. Thus, parental level of education did demonstrate a relationship with respondent level of literacy (and grade-level achievement; cf., Appendix A).

As expected, literacy (and grade-level achievement; cf., Appendix A) characteristics demonstrated a relationship with both family income and with employment. However, biliterates generally were more likely to earn more and to be employed than were those dominant in English literacy only. Those dominant in Spanish literacy only were more likely to be employed, and to earn more, than those who were non-functionally literate.

While the data indicate some differences among groups, based upon literacy, relative to the desire to naturalize, the differences were not significant using Chi-Square.[1] Those literate (in either language or both languages) were more likely to be registered to vote than were the non-functionally literate.

[1] There was, however, a signficant relationship between grade-level achievement and being registered to vote and voting; cf., Appendix A).

However, biliterates were more likely to vote than the English literate, and biliterates and the Spanish literate were more likely to be registered to vote than the English literate. Literacy differences relative to political party affiliation were not significant using Chi-Square.[2]

Based upon an analysis of childhood language environment, only a minority of the sample came from predominately English-speaking families and neighborhoods. While language of use and language background was generally associated with functional literacy, there was a stronger association for English than for Spanish. Lower educational achievement was also more associated with Spanish language childhood environment (cf., Appendix A).

Regarding language attitudes and attitudes toward biliteracy, the findings generally indicate that the great majority of those surveyed believed there are advantages to being bilingual in the United States, and that both bilingualism and biliteracy should be promoted among their children.

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2 However, differences based upon grade-level achievement were significant (cf., Appendix A).

CONCLUSIONS AND RECOMMENDATIONS

As expected, it may be argued that economic success and political participation are associated with literacy generally. However, for Chicanos, while English literacy was generally associated with family income, employment and political participation tended to be more strongly associated with biliteracy. Biliterates as well as those dominant in English literacy only generally had advantages over those dominant in Spanish literacy. The Spanish literacy only group likewise generally had advantages over those not functionally literate in either language.

Thus, in certain areas, such as political participation, both biliteracy and Spanish literacy appear to be as important as English literacy. It would, therefore, appear that the tendency, in this country, to equate literacy with English literacy only fails to recognize the positive force of biliteracy and Spanish literacy for such groups as Chicanos; it under-represents and fails to account from a wider prevalence of literacy resources among the Chicano population.

While English literacy is important in this society, for Chicanos, biliteracy and Spanish literacy are likewise important. Learning English and becoming literate in English are important to the majority of Chicanos, but so too are learning and maintaining

the Spanish language and promoting biliteracy among the next generation.

The perception of high rates of "illiteracy" (or at least lack of sufficient literacy) in the United States, do appear to be accentuated, in part, by a general failure to at least acknowledge, accommodate, and utilize the Spanish literacy resources of such subgroubs as Chicanos. Given that biliteracy and Spanish literacy (in addition to English literacy), are also important among the Mexican origin population, there is a need for language policies and educational policies which recognize and utilize these resources.

In this regard, Kloss (1977, 1971) has noted that there are several possible postures which governments can assume toward non-majority languages within their countries: (1) promotion, (2) accommodation, (3) tolerance, or (4) suppression. While it is unlikely that the majority will attempt to promote Spanish literacy on an equal basis with English literacy, acknowledging languages other than English (e.g., Spanish), which are important in language minority communities, and accommodating the use of, and literacy in, those languages can provide for a broader of use resources which exist. Failure to acknowledge, or attempts to suppress, Spanish (and other languages) not only has a negative impact on those who use the Spanish language and Spanish as their language

of literacy, but also limits the resources of society as a whole.

Consequently, there is a need to recognize the resources which exist within the workplace and in society at large, and to recognize the value of literacy apart from English only literacy in promoting political participation.

Finally, to the extent that language minorities should have the right to choose their own literacy practices (and the processes of promoting literacy), biliteracy and bilingualism should be recognized as legitimate means for promoting literacy and language resources of the groups themselves, and of the nation as a whole.

What Additional Research is Needed?

Further analysis of the NCS is needed specifically controlling for nativity, age and sex. Beyond the analysis of these data, there is also a need for a new national survey of Chicanos which can use the NCS as baseline data in an attempt to measure more recent developments within the population (especially given the new immigration laws and the amnesty program). There is also the need for improvements in future national surveys relative to their ability to collect literacy data. The NCS, for example, could have been improved by the addition of several questions addressing the kind of literacy materials used by respondents, as

well as the frequency of their use. In addition, the NCS "presumed" literacy (in either English or Spanish) since many questions required respondents to answer by selected printed cards in either English or Spanish. It is likely that this design factor contributed to the amount of missing data. Therefore, literacy should not be a prerequisite of survey designs.

In addition to national surveys, which must of necessity rely upon self-report, there is also a need for direct measures of literacy. Further analysis of the NCS is limited, in part, because of the limitations of self-report data. Scribner and Cole (1981) were able to pursue a factor analysis of various literacies among the Vai, but they were using direct measures. Given, the construction of the biliteracy variable, herein, which is largely a nominal variable, further analysis is greatly restricted. Interval variables such as Scribner and Coles' would allow for a much more in-depth statistical analysis.

However, beyond direct measures, more ethnographic analysis is needed of the functions and uses of literacy within multilingual communities. What, for example, is the interaction between English and Spanish channels of literacy. What roles do biliterates play within their communities and within the workplace in mediating between the English literates and the Spanish literates? What coping strategies have been developed by

those who are literate in Spanish, but not in English? What coping strategies have been developed between those who are not functionally literate in either English or Spanish?

What Programmatic Considerations are Needed to Promote Chicano and Latino Adult Literacy?

Crandall (1979) makes several recommendations for language minorities which are of general relevance here. First, there is a need for the adult learner to be involved in determining what type of literacy program is to be undertaken. In essence, Crandall is arguing for the adult learner's "right" to make language choices (cf., Macías, 1979). Rather than assuming that the target language of literacy "must" be English. Crandall notes that the adult learner should be allowed to exercise choice in the targeted language of literacy. Programs need to allow for an informed choice to be made based upon several factors: the availability of teachers and literacy materials in L1, the eventual literacy functions that will need to be learned, the ease of transferring literacy skills from L1 to L2, and the amount of time available for literacy training. Crandall argues that if the adult chooses to become literate in L1 that the "ESL" program should take that into consideration.

Vargas (1986) maintains that effective literacy programs for Latino adults must be based on proven models. Among those

which he sees as effective are community-based literacy programs which can be particularly effective in reaching individuals overlooked by federal programs. One such program which Vargas notes was the Barrio Education Project (BEP) in San Antonio, Texas. The program was considered unique because the literacy curriculum was developed from the learner's self-identified needs. Reading was taught through discussion of meaningful topics with personal and social relevance to the students. Following a Freirian approach, the model built on the learner's previous experiences and attempted to increase the learners social and political awareness. Thus, the model saw the process of literacy acquisition literacy as an empowering process.

Vargas also notes that four Family English Literacy Programs (FELPs), funded in 1986 hold promise. Since family literacy has been identified as one of the major means of breaking cycles of "illiteracy" or lower levels of literacy (Impink-Hernández, 1985; Taylor, 1983), these programs are of major interest. Vargas notes that three of the four projects are using bilingual personnel. Again, topics are chosen based upon their interest value and relevance to family needs. Parents also receive instruction in how to help their children succeed in school.

Vargas (1986) concludes by identifying five major characteristics needed in programs designed to assist Latinos. While these characteristics are not unique to effective programs for only Chicanos or Latinos, he contends that these characteristics do take into account their special needs. These five characteristics are summarized below:

> 1. Effective literacy programs need to be accessible, i.e., they need to be located in the communities of those in need. Moreover, the environment needs to be non-threatening.
>
> 2. Programs must have appropriately trained bilingual personnel.
>
> 3. The curriculum must be based upon student needs and interests. English fluency should not be assumed or a prerequisite.
>
> 4. The services must be inexpensive since many low-income individuals cannot afford them.
>
> 5. Programs must have an effective outreach mechanism. Information cannot be merely distributed in written form, or only in English. Community organizations such as churches, and community events can be used to help promote programs. [pp. 19-21]

What Policy Considerations are Necessary to Promote Chicano/Latino Literacy for Children and Adults?

In terms of overall policy recommendations designed to affect both Latino children and adults, Vargas (1986) makes seven major recommendations which are summarized below (again, many of the ideas in these recommendations may have relevance to other groups):

1. Greater focus is needed on improving the educational system. Greater focus is needed on promoting *literacy* skills, rather than just *language* skills. Since the intent of the federal Bilingual education act is to do this, a renewed commitment to the program, and increased funding is needed. Moreover, to address the growing problems of drop-outs, educational interventions need to be made at the lower grades.

2. School success involves greater community involvement. More Chicano and Latino parental involvement is necessary to promote the educational success of their children. Outreach programs to parents are needed.

3. Current public literacy programs such as those under Adult Education Act (AEA), Job Training Partnership Act (JTPA), and the Library services and Construction Act, need to be restructured to reach individuals with no, or limited, oral English abilities. Funding to such programs needs to be increased since these programs are currently reaching only a small number of eligible individuals (especially among Chicanos and Latinos).

4. All major programs (whether they are state, local, or

private efforts), need to include an ESL component, and when they are based within Spanish-speaking communities, need to employ bilingual personnel. Special outreach efforts may be needed for those not literate in L1.

5. Literacy programs should be designed to accommodate the special needs of working parents and lower income individuals. Thus, provision for child care and transportation may be necessary ingredients of successful programs.

6. Successful program models need to be better identified, documented, and duplicated. Successful programs, such as the Barrio Education Project, have been allowed to fail or suffer from inadequate funding. Since community-based organizations are located within the areas of greatest need and have direct ties to the community, their role in promoting literacy should be increased.

7. Future literacy initiatives at the national level should more specifically address the needs of Chicanos and Latinos. The only such initiative which has been proposed recently was the English Proficiency Act of 1986. The act was not funded. [pp. 21-24]

To these recommendations, it should be added that since the majority of the Mexican-born adults were found not to be literate in English, much more needs assessment should be undertaken by adult basic education program planners and curriculum planners. All too often adult ESL programs do not formulate their curriculum based upon the students needs and backgrounds. Rather, the curriculum is based upon presumed

needs and available resources and materials. While their may be many fine ESL and adult literacy programs, adult basic education under the label of "second language" instruction can easily become a "mixed bag" of oral language and literacy instruction, with little consideration regarding the relationship between the two. Second "language" instruction facilitated by the use of textbooks "presumes" familiarity with print/literacy abilities in L1 (which may be lacking or not well developed). Thus, the beginning point of adult literacy and second language literacy programs must be on the student's needs and goals. Given those needs and goals, and the program's resources and expertise, curriculum should be generated through a "negotiation" between the student and the program.

Obviously, to implement these recommendations would require major shifts in current policy and programmatic thinking. However, since "illiteracy" persists as a focus of national concern, it is apparent that these recommendations need much consideration.

BIBLIOGRAPHY

Ainsworth, N. (1981). Oral narratives of bilingual Mexican-American adults enrolled in basic education. Final report to NIE. (ERIC Document Reproduction Service No. ED 228852).

Alderson, J.C. & Urquhart, A.H. (Eds.) (1984). *Reading in a foreign language*. New York: Longman.

Amastae, J. & Elías-Olivare, L. (Eds.) (1982). *Spanish in the United States: Sociolinguistic aspects*. New York: Cambridge University Press.

Anderson, A., & Stokes, S.J. (1982). Social and institutional influences on the development of literacy. In H. Goelman, A.A. Oberg, & F. Smith (Eds.), *Awakening to literacy* (pp. 24-37). Portsmouth, NH: Heinemann.

Anderson, T. (1975). Biliteracy, or the bilingual child's right to read. *Journal of the Linguistic Association of the Southwest, 1* (2), 54-62.

Andersson, B.V., & Barnitz, J.G. (1984). Cross-cultural schemata and reading comprehension instruction. *Journal of Reading, 28* (2),102-108.

Arce, C.H. (n.d.). *Mexican origin people in the United States: The 1979 Chicano Survey: Variable dictionary, codebook and related materials*. Ann Arbor, MI: Institute for Social Research.

Babbie, E. (1973). *The practice of social research* (4th ed.). Belmont, CA: Wadsworth.

Banks, J.A. (1984). *Teaching strategies for ethnic studies*. Boston, MA: Allyn & Bacon.

Barkin, F. (1981). Establishing criteria for bilingual literacy: The case of bilingual university students. *The Bilingual Review (La revista bilingue), 8*(1), 1-13.

Been, S. (1975). Reading in the foreign language teaching program. *TESOL Quarterly, 9*(3):233-242.

Bendor-Samuel, D. (1984). On the study of Literacy. In R.B. Kaplan *et al.* (Eds.) *Annual Review of Applied Linguistics. 1983* (pp. 2-6). Rowley, MA: Newbury House.

Bennett, A.T. (1983). Discourses of power, the dialects of understanding, the power of literacy. *Journal of Education, 165* (1), 53-74.

Bernstein, B. (1970). Class, codes and control. In P.P. Giglioli (Ed.), *Language and social context* (pp. 157-216). New York: Viking Penguin.

Bhatia, T.K. (1984) Literacy in monolingual societies. In R.B. Kaplan *et al.* (Eds.) *Annual Review of Applied Linguistics. 1983*(pp. 23-38). Rowley, MA: Newbury House.

Bilingual, bicultural, and bidialectal studies related to reading and communication skills: Abstracts of doctoral dissertations published in "Dissertation Abstracts International" (1983, July - December). Urbana, Ill.: ERIC Clearninghouse on Reading and Communication Skills. (ERIC Document Reproduction Service No. 238 018)

Borg, W.R, & Gall, M.D. (1983). *Educational Research.* New York: Longman.

Bowles, S., & Gintis, H. (1976). *Schooling in capitalist America.* New York: Basic Books.

Breland, H.M. & Durán, R.P. (1985). Assessing English composition skills in Spanish-speaking populations. *Educational and Psychological Measurement, 45* (2), 309-318.

Brumfit, C.J. (1977). The teaching of advanced reading skills in foreign languages with particular reference to English as a foreign language. In V. Kinsell (Ed.), *Language teaching and linguistics: Surveys*. Cambridge, England: Cambridge University Press.

Cabello, B. (1984). Cultural interference in reading comprehension: An alternative explanation. *Bilingual Review, 11* (1), 12-20.

California Postsecondary Education Commission (CPEC) (1985). Background papers to a prospectus for California postsecondary education: 1985-2000. Commission Report 85-14. Sacramento, CA: California.

California State Department of Education (1984). SB 813: Review of language reclassification. Sacramento CA: California State Department of Education.

Carrasco, R.L. (1981). Expanded awareness of student performance: A case study in applied ethnographic monitoring in a bilingual classroom. In H.T. Trueba, G.P. Guthrie, & K. H. Au (Eds.), *Culture and the Bilingual Classroom*. Rowley, MA: Newbury House.

Carter, T.P., & Segura, R.D. (1979). *Mexican Americans in school: A decade of change*. New York: College Entrance Examination Board.

Castell, S. & Luke, A. (1983). Defining `literacy' in North American schools: Social and historical consequences. *Journal of Curriculum Studies, 15* (4), 373-389.

Census of Population, U.S. Summary (1980). Washington, DC: U.S. Department of Commerce Bureau of the Census.

Clarke, M. (1980). The short circuit hypothesis of ESL reading--Or when language competence interferes with reading performance. *Modern Language Journal, 64* (2), 203-209.

Clifford, G.J. (1984). Buch und lesen: Historical perspectives on literacy and schooling. *Review of Educational Research, 54* (4) 472-500.

Clyne, M. G. (1982). *Multilingual Australia.* Melbourne: River Siene Publications.

Cohen, A.D. (1975). Assessing language maintenance in Spanish speaking communities in the Southwest. In E. Hernández-Chávez, A.D. Cohen, & A.F. Beltramo (Eds.) *El lenguaje de los Chicanos: Regional and social characteristics used by Mexican Americans* (pp. 165-203). Arlington VA: Center for Applied Linguistics.

Collins, R. (1979). *The credential society: An historical sociology of education and stratification.* New York: Academic Press.

Cook, W.D. (1977). *Adult literacy education in the United States.* Newark, DE: International Reading Association. (ERIC Document Reproduction Service No. Ed. 138 972).

Cook-Gumperz, J. (1986). Literacy and schooling: An unchanging equation? In J. Cook-Gumperz (Ed.), *The social construction of literacy* (pp. 16-45). Cambridge: Cambridge University Press.

Cortés, C.E. (1985). The education of language minority students: A contextual interaction model. Office of Bilingual Education, California State Department of Education (Ed.), *Schooling and language minority students: A theoretical framework* (pp. 3-34). Los Angeles, CA: Evaluation, Dissemination and Assessment Center, CSULA.

Cortés, C.E. (1980). Mexicans. In S. Thernstrom, A. Orlov, O. Handlin, (Eds.), *Harvard encyclopedia of American ethnic groups* (pp. 697-719). Cambridge, MA: Belknap Press.

Crandall, J. (1984). Adult literacy. In R.B. Kaplan *et al.* (Eds.), *Annual Review of Applied Linguistics, 1983*(pp. 162-180). Rowley, MA: Newbury House.

Crandall, J. (1979). *Adult Vocational ESL. Language in Education: Theory and Practice*. Series, No. 22. Arlington, VA: Center for Applied Linguistics.

Cressy, D. (1977). *Literacy and the social order: Reading and writing in Tudor and Stuart England.* New York: Cambridge University Press.

Cronnell, B. (1985). Language influences in the English writing of third and sixth-grade Mexican American students. *Journal of Education Research,* 78 (3), 168-173.

Cummins, J. & Swain, M. (1986). *Bilingualism in Education.* New York: Longman.

Cummins, J. (1985). *Bilingualism and special education: Issues in assessment and pedagogy.* San Diego, CA: College-Hill Press.

Cummins, J. (1984a). Wanted a theoretical framework for relating language proficiency to academic achievement among bilingual students. In C. Rivera (Ed.), *Language proficiency and academic achievement* (pp. 2-19). Avon, England: Multilingual Matters.

Cummins, J. (1984b). Language proficiency and academic achievement revisited: A response. In C. Rivera (Ed.), *Language proficiency and academic achievement*(pp. 71-76). Avon, England: Multilingual Matters.

Cummins, J. (1983). Analysis-by-rhetoric: Reading the text or the reader's own projections? A reply to Edelsky *et al. Applied Linguistics, 4* (1), 23-41.

Cummins, J. (1981). The role of primary language development in promoting educational success for language minority students. In Office of Bilingual Education, California State Department of Education (Ed.), *Schooling and language minority students: A theoretical framework* (pp. 3-49). Los Angeles, CA: Evaluation, Dissemination and Assessment Center, CSULA.

de Bernard, A.E. (1985). Why Jose can't get it in class: The bilingual child and standardized reading tests. *Roeper Review, 8* (2), 80-82.

Davies, A, & Widdowson, H., (1974). The teaching of reading and writing. In Allen J.P. & S.P. Corder (Eds.), *Techniques in applied linguistics* (pp. 155-200). New York: Longman.

Dewey, J. (1938). *Education and experience.* Kappa Delta Pi. Reprinted (1963): New York: Macmillan.

Donaldson, M. (1978). *Children's minds.* Glasgow, Scotland: Collins.

Dubin, F., Eskey, E., Grabe, W. (Eds.) (1986). *Teaching Second Language Reading for Academic Purposes.* Reading, MA: Addison-Wesley.

Durán, R.P. (Ed.) (1981). *Latino language and communicative behavior.* Norwood, NJ: Ablex.

Durán, R.P. (1985). Discourse skills of bilingual children: Precursors of literacy. *International Journal of the Sociology of Language, 53,* 99-114.

Edelsky, C. (1986). *Writing in a bilingual program: Habia una vez.* Norwood, NJ: Ablex Publishing Corp.

Edelsky, C., & Jilbert, K. (1983). Bilingual children and writing: Lessons for all of us. *Volta Review, 87* (5), 57-72.

Edelsky, C., Hudelson, S., Flores, B., Barkin, F., Altweger, B., & Kristina, J. (1983). Semilingualism and language deficit. *Applied Linguistics, 4* (1), 3-22.

Erickson, F. (1984). School literacy, reasoning, and civility: An anthropologist's perspective. *Review of Educational Research, 54* (4), 525-546.

Faltis, C.J. (1984). Reading and writing in Spanish for bilingual

college students: What's taught at school and what's used in the community. *Bilingual Review, 11* (1), 21-32.

Farr, R. (1969). *Reading: What can be measured?* Newark, DE: International Reading Association.

Ferguson, C.A. (1959). Diglossia. *Word,15,* 325-340.

Ferreiro, E. & A. Teberosky (1982). *Literacy before schooling* (K.G. Castro, trans.). Portsmouth, NH: Heinemann.

Fillmore, L.W. (1986). Teaching bilingual learners. In M.C. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed.) (pp. 648-685). New York: MacMillan.

Fingeret, A. (1984). *Adult literacy education: Current and future directions.* Information Series, No. 284. Columbus, OH: ERIC Clearinghouse on Adult, Career, and Vocational Education, the National Center for Research in Vocational Education, Ohio State University.

Fishman, J.A., & Milán, W. (1983). Spanish language resources of the United States: Some preliminary findings. In L. Elias-Olivares (Ed.). *Spanish in the U.S. setting: Beyond the Southwest* (pp. 167-209). Rosslyn, VA: National Clearinghouse for Bilingual Education.

Fishman, J.A. (1980a). Ethnocultural dimensions in the acquisition and retention of biliteracy. *Basic Writing, 3*(1), 48-61.

Fishman, J.A. (1980b). Language Maintenance. In S.T. Thernstrom *et al.* (Eds.), *Harvard encyclopedia of American ethnic groups* (pp. 629-638). Cambridge, England: Cambridge University Press .

Fishman, J.A. (1967). Bilingualism with and without diglossia: Diglossia with and without bilingualism. *Journal of Social Issues, 23* (2), 29-38.

Fishman, J.A. (1966). *Language loyalty in the United States: The*

maintenance and perpetuation of non-English mother tongues by American ethnic and religious groups. Berlin: Mouton.

Freire, P. (1970a). *Pedagogy of the oppressed* (M.B. Ramos, trans.). New York: Herder & Herder.

Freire, P. (1970b). *Cultural action for freedom.* Cambridge, MA: Harvard Educational Review.

Garcia, P. (January,1988). Personal Communication.

Garza, F., and Orum, L.S. (1982, December). Illiteracy in the Hispanic community. Statement of Francisco Garza, Legislative Director, National Council of La, Raza, before the Subcommittee on Post Secondary Edcuation of the House Education and Labor Committee, Washington, DC: (ERIC Document Reproduction Service No. ED 242 826).Gee, J.P. (December, 1986). Orality and literacy: From the savage mind to ways with words. *TESOL Quarterly, 20* (4), 719-746.

Genesse, F. (1984). On Cummins' theoretical framework. In C. Rivera (Ed.), *Language proficiency and academic achievement* (pp. 20-27). Avon, England: Multilingual Matters.

Giroux, H.A. (1983a). *Theory and resistance in education: A Pedagogy for the Opposition.* South Hadley, MA: Bergin and Garvey.

Giroux, H.A. (1983b). Theories of reproduction and resistance in the new sociology of education: A critical analysis. *Harvard Educational Review, 53* (3), 257-293.

Gonzalez, J.M. (1979). Coming of age in bilingual/bicultural education: A historical perspective. In H.T. Trueba, C.B Barnett-Mizahi, C.H. Au (Eds.), *Bilingual Multicultural education and the professional: From theory to practice*(pp. 1-10). Rowley, MA: Newbury House.

Goodman, K., & Goodman, Y. (1983). Reading and writing relationship: Pragmatic functions. *Language Arts, 60* (5), 590-599.

Goodman, K., Goodman, Y., & Flores, B. (1979). *Reading in the bilingual classroom. Literacy and Biliteracy.* Rosslyn, VA: National Clearninghouse for Bilingual Education.

Goodman, K. (1970). Psycholinguistic universals in the reading process. *Journal of Typographic Research, 4,* 103-110.

Goodman, K. (1969). Analysis of oral reading miscues: Applied psycholinguistics. *Reading Research Quarterly, 5* (1), 9-30.

Goodman, K., (1967). Reading: A psychological guessing game. *Journal of the Reading Specialist, 4,* 126-135.

Goodman, Y. (1982). The development of initial literacy. In H. Goelman, A.A. Oberg, & F. Smith (Eds.), *Awakening to literacy* (pp. 102-109). Portsmouth, NH: Heinemann.

Goodman, Y. & Burke, C. (1980). *Reading strategies: Focus on comprehension.* New York: Holt, Rinehart & Winston.

Goody, J.R., & Watt, I. (1963). The consequences of literacy. *Comparative Studies in Society and History, 5,* 304-26.Graff, H.J. (1979). *The literacy myth: Literacy and social structure in the 19th century city.* New York: Academic Press.

Greenfield, P. (1972). Oral or written language: The cognitive consequences of literacy development in Africa, U.S., and English. *Language and Speech, 15*(1), 169-178.

Hall, E.T. (1959). *The silent language.* Garden City, New York: Anchor Books.

Hatch, E. M. (1983). *Psycholinguistics: A second language perspective.* Rowley, MA: Newbury House.

Harman, D. H. (1987). *Illiteracy: A national dilemma.* New York: Cambridge.

Harste, J.C., Woodward, V.A., Burke, C.L. (1984). Examining our assumptions: A transactional view of literacy and learning. *Research in the Teaching of English, 18* (1), 1984, 84-108.

Harste, J.C., & Burke, C. (1980). Examining instructional assumptions: The child as informant. *Theory into Practice, 19,* 170-178.

Havelock, E.A. (1963). *Preface to Plato.* Cambridge, MA: Belknap Press of Harvard University Press.

Heath, S.B. (1986). Sociocultural contexts of language development. In Bilingual Education Office, California State Department of Education (Ed.), *Beyond language: Social and cultural factors in schooling language minority students* (pp. 143-186). Los Angeles, CA: Evaluation, Dissemination and Assessment Center, California State University, Los Angeles.

Heath, S.B. (1984). Literacy or literate skills? Considerations for ESL/EFL learners. P. Larson, E.L Judd, & D. Messerschmitt (Eds.), *On TESOL 1984: A brave new world for TESOL* (pp.15-28). Washington, DC: Teachers of English to Speakers of Other Langauages.

Heath, S.B. (1982a). What no bedtime story means: Narrative skills at home and school. *Language and Society, 11*(2), 49-76.

Heath, S.B., with Thomas, C. (1982b). The achievement of preschool literacy for mother and child. In H. Goelman, A.A. Oberg, & F. Smith (Eds.), *Awakening to literacy* (pp. 51-72). Portsmouth, NH: Heinemann.

Heath, S.B. (1980). The functions and uses of literacy. *Journal of Communication, 30,*1-11.

Hernández, N.G. (1979). The education of the Mexican American--A continuing aspiration. Address presented at the Annual Conference of the Texas Association for Bilingual Education (Houston, TX, Spring, 1979). (ERIC Document Reproduction Service No. ED 198 983).

Hernández-Chávez, E., Cohen, A.D., & Beltramo, A.F. (Eds.) (1975). *El lenguaje de los Chicanos: Regional and social characteristics used by Mexican Americans.* Arlington VA: Center for Applied Linguistics.

Hoffer, K.R. (1983). Assessment and instruction of reading skills: Results with Mexican-American students. *Learning Disability Quarterly, 6* (4), 458-467.

Horowitz, R. (1984). Orality and literacy in bilingual-bicultural contexts. *NABE Journal, 8* (3), 11-26.

Hudelston, S. (Ed.) (1981). *Learning to read in different languages.* Arlington, VA: Center for Applied Linguistics.

Hudson, R.A. (1980). *Sociolinguistics.* Cambridge, England: Cambridge University Press .

Hunter, C. & Harman, D. (1979). *Adult literacy in the United States.* New York: McGraw-Hill.

Illich, I. (Fall 1979). Vernacular values and education. *Teacher's College Record, 81* (1), 31-75.

Impink-Hernández, M.V. (June, 1985). Literacy and minority language families. *Memo.* National Clearinghouse for Bilingual Education.

Kaplan, R.B., (1986). Cultural thought patterns revisited. In U. Connor & R.B. Kaplan (Eds.), *Writing across languages. Analysis of L2 Text* (pp. 9-21) Reading, MA: Addison-Wesley.

Kaplan, R.B. *et al.* (Eds.) (1984a). *Annual Review of Applied Linguistics: 1983.* Rowley, MA: Newbury House.

Kaplan, R.B. (1966). Cultural thought patterns in intercultural education. *Language learning, 16,* 1-20.

Kindell, G. (1984). Linguistics and Literacy. In R.B. Kaplan *et al.* (Eds.) *Annual Review of Applied Linguistics. 1983* (pp. 8-23). Rowley, MA: Newbury House. .

Kirsch, I. & Guthrie, J.T. (1977-1978). The concept and measurement of functional illiteracy. *Journal of Education, 13*(4), 486-507.

Kirsch, I.S., & Jungeblut, A. (1986). Literacy: Profiles of America's Young Adults. ETS report no. 16-PL-02. Princeton, NJ: Educational Testing Service.

Kloss, H. (1977). *The American bilingual tradition.* Rowley, MA: Newbury House.

Kloss, H. (1971). Language rights of immigrant groups. *International Migration Review, 5* , 250-268.

Kozol, J. (1985). *Illiterate America.* Garden City, NY: Anchor Press.

Krashen, S. (1984). *Writing Research: Theory and application.* New York: Pergamon.

Krashen, S. (1981). Bilingual education and second language acquisition theory. Office of Bilingual Education, California State Department of Education (Ed.), *Schooling and language minority students: A theoretical framework* (pp. 51-116). Los Angeles, CA: Evaluation, Dissemination and Assessment Center, California State University, Los Angeles.

Kucer, S.B. (1987). The cognitive base of reading and writing. In J. Squire (ed)., *The dynamics of language learning* (pp. 27-51).

Urbana, IL: Eric Clearinghouse on Reading and Communication Skills.

Kucer, S.B. (1986). Counterpart strategies: Fine-tuning language with language. *Reading Teacher, 40*,186-193.

Kucer, S.B. (1985). The making of meaning: Reading and writing as parallel processes. *Written communication, 2* (3), 317-336.

Lambert, D. & Freed, F. (Eds.) (1982). *The loss of language skills.* Rowley, MA: Newbury House.

Labov, W. (1972). *Language in the inner city.* University of Pennsylvania Press.

Labov, W. (1970). The study of language in social context. *Studium Generale,* 23, 66-84.

Lado, R. (Lado, R. de Hanson, I, & D'Emillo, T. (1982). Letura preescolar bilingue en Washington (Preschool bilingual reading in Washington). *Lectura y Vida. 3* (4), 19-22.

Lado, R. (1981-1982). Developmental reading in two languages. *NABE Journal, 6* (2-3), 99-110.

Leacock, E.B. (1972). Abstract versus concrete speech: A false dichotomy. In C.B. Cazden, V.P. John, & D. Hymes (Eds.), *Functions of language in the classroom* (pp. 111-134). Prospect Heights, IL: Waveland.

LeBlanc, R. & Painchaud (1986). Self-assessment as a second language placement instrument. *TESOL Quarterly ,19* (4), 673-687.

Leibowitz, A.H. (1984). The official character of language in the United States: Literacy requirements for immigration, citizenship, and entrance requirements for into American life. *Aztlán, 15* (1), 25-70.

Leibowitz, A.H. (1971). *Educational Policy and Political Acceptance: The imposition of English as the language of instruction in American schools.* Washington, DC: Center for Applied Linguistics.

Leibowitz, A.H. (1969). English literacy: Legal sanction for discrimination. *Notre Dame Lawyer, 45* (1), 7-66.

Leichter, J.H. (1982). Families as environments for literacy. In H. Goelman, A.A. Oberg, & F. Smith (Eds.), *Awakening to literacy.* Portsmouth, NH: Heinemann, 38-50.

Levine, K. (1982, August). Functional literacy: Fond illusions and false economies. *Harvard Educational Review, 52* (3), 249-267.

Levy-Strauss, C. (1966). *The savage mind.* Chicago, IL: University of Chicago Press.

Luria, A.R. (1976). *Cognitive development: Its cultural and social foundations* (M. Cole. Ed., M. Lopez-Morillas & L. Solotaroff, trans.). Cambridge, MA: Harvard University Press .

Mace-Matluck, B.J. (1982). Literacy instruction in bilingual settings: A synthesis of current research. Report. Los Alamitos, CA: National Center for Bilingual Research.

Mace-Matluck, B.J. *et al.* (1982). Language and literacy learning in bilingual instruction: Preliminary report. Descriptive studies -- Asian, Spanish, Navaho. Washington, DC: National Institute of Education. (ERIC Document Reproduction Service No. ED No. 245 571).

Macías, R.F. (1986). Think piece on Latino illiteracy. Report to the Tomás Rivera Center. Claremont, CA: Tomás Rivera Center.

Macías, R.F. (1985). National language profile of the Mexican-origin population in the United States. In W. Conner (Ed.),

Mexican-Americans in Comparative Perspective. Washington, DC: The Urban Institute Press.

Macías, R.F. (1984a), Institutional languages policies: A medical and hospital services case study. Unpublished Manuscript. Center for Multilingual and Multicultural Research. University of Southern California.

Macías, R.F. (1984b). "Cauldron--boil & bubble:" United States language policy towards indigenous language groups in the nineteenth century. Unpublished manuscript to appear in *Aztlán*. Center for Multilingual and Multicultural Research. University of Southern California.

Macías, R.F., & Spencer, M. (1984). Estimating the number of language minority and limited English proficient persons in the U.S.: A comparative analysis of the studies. Los Alamitos, CA: National Center for Bilingual Research.

Macías, R.F. (1982). Language diversity among United States Hispanics: Some background considerations for schooling and for non-biased assessment. In J. Spielberg (Ed.), *Proceedings: International symposium on Hispanic American diversity*. East Lansing: Michigan State Department of Education.

Macías, R.F. (1979). Choice of language as a human right: Public policy implications. In R.V. Padilla (Ed.), *Ethnoperspectices in bilingual Education Research: Bilingual education and public policy in the United States* (PP. 39-57). Ypsilanti, MI: Eastern Michigan University.

Mackay, R., Barkman, B., Jordan, R. (Eds.) (1979). *Reading in a second language*. Rowley, MA: Newbury House.

Martin-Jones, M., Romaine, S. (1986). Semilingualism: A half-baked theory of communicative competence. *Applied Linguistics, 7* (1), 26-38.

Miller, R. (1985). Mexican literacy education today. *Journal of Reading, 29* (2), 132-134.

Modiano, N. (1973). *Indian education in the Chiapas highlands.* New York: Holt, Rhineart & Winston.

Mortensen, E. (1984). Reading achievement of native Spanish-speaking elementary students in bilingual versus monolingual programs. *Bilingual Review, 11* (3), 31-36.

Ogbu, J.U., & Matute-Bianchi, M.E. (1986). Understanding sociocultural factors: Knowledge, identity, and school adjustment. In Bilingual Education Office, California State Department of Education (Ed.), *Beyond language: Social and cultural factors in schooling language minority students* (pp. 73-141). Los Angeles, CA: Evaluation, Dissemination and Assessment Center, California State University, Los Angeles.

Office of Bilingual Education (OBE), California State Department of Education (1982). *Basic principles for the education of language-minority students: An overview.* Sacramento, CA: California State Department of Education.

Oller, J. & Perkins, K. (1980). *Research in language testing.* Rowley, MA: Newbury House.

Olson, D.R. (1982). See! Jumping! Some oral language antecedents of literacy. In H. Goelman, A.A. Oberg, & F. Smith (Eds.), *Awakening to literacy* (pp.185-192). Portsmouth, NH: Heinemann.

Olson, D.R. (1977). From utterance to text: The bias of language in speech and writing. *Harvard Educational Review, 47,* 257-281.

Ong, W.J. (1982). *Orality and literacy: The technologizing of the word.* London: Methuen.

Ortiz, L.T., & Engelbrecht, G. (1986). Partners in biliteracy: The school and the community. *Language Arts, 63*(5), 458-465.

Ortiz, V. (1987). Literacy among Hispanic Young Adults. Final report to SSRC/IUP Grant Program for Contemporary Hispanic Policy Issues. Educational Testing Service.

Orum, L.S. (1982). The educational status of Hispanic American children. Washington, DC: The National Council of La Raza. (ERIC Document Reproduction Service No. ED 240 853).

Padilla, R. (Ed.) (1980). *Theory in bilingual education: Ethnoperspectives in bilingual education research* (Vol. II). Ypsilanti, MI: Eastern Michigan University, Bicultural Teacher Education Programs.

Parsons, A. (1983). Self-concept and reading achievement in the bilingual setting. *NABE Journal, 8*(1), 29-40.

Peñalosa, F. (1980). *Chicano sociolinguistics: A brief introduction.* Rowley, MA: Newbury House.

Peñalosa, F. (1975), Chicano Multilingualism and Multigossia. In E. Hernández-Chávez, A.D. Cohen, & A.F. Beltramo (Eds.), *El lenguaje de los Chicanos: Regional and social characteristics used by Mexican Americans* (pp. 165-203). Arlington VA: Center for Applied Linguistics.

Penfield, J. (1984). Vernacular base of literacy development in Chicano English. In J. Ornsten-Galicia (Ed.), *Form and function in Chicano English* (pp.71-82). Rowley, MA: Newbury House.

Penfield, J. (1982). Chicano English: Implications for assessment and literacy development. Bilingual education paper series, Vol, 6, no. 5. Los Angeles, CA: Dissemination and Assessment Center, California State University, Los Angeles. (ERIC Document Reproduction Service No. ED 255 050).

Penfield, J. (1981). Literacy development in bilingual contexts: Mexican-Americans. Paper presented at the annual meeting of the American Association for Applied Linguistics (New York, December 27-30, 1981).

Perdue, C. (ed.) (1984). *Second language acquisition by adult immigrants: A field Manual.* Rowley, MA: Newbury House.

Prigoff, A.W. (1984). Self-esteem, ethnic identity, job aspiration and school stress of Mexican American youth in a midwest urban barrio. *Dissertation Abstracts International, A: The Humanities and Social Sciences, 45,* 2257A. (University Microfilms No. 84-20,403).

Resneck, D.P., & Resneck, L.B. (1977). The nature of literacy: An historical exploration. *Harvard Educational Review, 47*(3), 370-385.

Riedler-Berger, C.R. (1986). A case study of biliteracy reading acquisition in two non-public schools. *Dissertation Abstracts International, A: The Humanities and Social Sciences, 46* (11), 3216-A.

Rigg, P. (1977). The miscue-ESL project. In D. Brown *et al.* (Eds.), *On TESOl,* (pp. 109-117). Washington, DC: TESOL.

Rivera, C. (Ed.) (1984). *Language proficiency and academic achievement.* Avon, England: Multilingual Matters.

Sánchez, R. (1983). *Chicano Discourse: Socio-historic perspectives.* Rowley, MA: Newbury House.

Sánchez, R. (1976). Symposium on linguistics and the Chicano. *Aztlán, 7* (1), 1-5.

Sántos, R.L. (1985). A methodological report on the sampling design of the 1979 National Chicano Survey (SCCR working paper no. 11). Stanford, CA: Stanford Center for Chicano Research.

Schieffelin, B., Gilmore, P., & Freedle, R.O. (Eds.) (1986). *The Acquisition of literacy: Ethnographic perspectives. Advances in discourse processes series* (Vol. 21). NP: Ablex.

Schieffelin, B.B., & Cochran-Smith, M. (1982). Learning to read culturally: Literacy before schooling. In H. Goelman, A.A. Oberg, & F. Smith (Eds.), *Awakening to literacy* (3-23). Portsmouth, NH: Heinemann.

Scribner, S. (1984). Literacy in Three Metaphors. *American Journal of Education, 93* (1), 6-21.

Scribner, S. & Cole, M. (1981). *The psychology of literacy.* Cambridge, MA: Harvard University Press.

Scribner, S. & Cole, M. (1978). Literacy without schooling: Testing for intellectual effects. *Harvard Educational Review, 48,* 448-461.

Scollon, R., & Scollon, S. (1981). *Narrative, literacy and face in interethnic communication.* Norwood, NJ: Ablex.

Simmon, P. (1980). *The tongue tied American.* New York: Continuum.

Smith, F. (1983). *Essays into literacy.* Portsmouth, NH: Heinemann.

Smith, F. (1982). *Understanding reading: A psycholinguistic analysis of reading and learning to read* (3rd ed). New York: Holt, Rinehart & Winston.

Smith, F. (1975). *Comprehension and Learning.* New York: Holt, Rinehart & Winston.

Simth, F. (1973). *Psycholinguistics and Reading.* New York: Holt, Rinehart & Winston.

SPSSX, Inc. (1986). *SPSSX user's guide* (2nd ed.). New York: McGraw-Hill.

Spolsky, B. (1984). A note on the dangers of terminological innovation. In C. Rivera (Ed.), *Language proficiency and academic achievement* (pp. 41-43). Avon, England: Multilingual Matters.

Statistical Abstract of the United States (1980). Washington, DC: United States Government Printing Office.

Street, B.V. (1984). *Literacy in theory and practice.* Cambridge, England: Cambridge University Press.

Stubbs, M. (1980). *Language and literacy: The sociolinguistics of reading and writing.* London: Routledge and Kegan Paul.

Swain, M, & Lapkin, S. (1981). *Bilingual education in Ontario: A decade of research.* Toronto, Ontario: Ministry of Education, Ontario.

Szwed, J. (1981). *The ethnography of literacy.* In M.F. Whiteman (Ed.), *Writing: The nature, development and teaching of written communication, Vol. 1: Variation in writing* (pp. 13-23). Hillsdale, NJ: Erlbaum.

Taylor, D. (1983). *Family literacy: Young children learning to read and write.* Portsmouth, NH: Heinemann.

Thernstrom, S., Orlov, A., Handlin, O. (19 80). *Harvard encyclopedia of American ethnic groups.* Cambridge, MA: Belknap.

Thonis, E. (1983). *English-Spanish connections: Excellence in English for Hispanic children through Spanish Language and literacy development.* Northvale, NJ: Santillana.

Thonis, E.W. (1981). Reading instruction for language minority students. In Office of Bilingual Education, California State

Department of Education (Ed.), *Schooling and language minority students: A theoretical framework* (pp. 147-181). Los Angeles, CA: Evaluation, Dissemination and Assessment Center, California State University, Los Angeles.

Thonis, E.W., & Ramirez, A.R. (Eds.) (1976). *Literacy for America's Spanish speaking children.* Newark, DE: International Reading Association. (ERIC Document Reproduction Service No. ED 126 425).

Troike, R.C. (1984). SCALP: Social and cultural aspects of language proficiency. In C. Rivera (Ed.), *Language proficiency and academic achievement* (pp. 44-54). Avon, England: Multilingual Matters.

Trueba, H.T. (1984). The forms, functions, and values of literacy: Reading for survival in a barrio as a student. *NABE Journal, 9* (1), 41-51.

Tyler, R. (1949). *Basic principles of curriculum and instruction.* University of Chicago Press, IL: University of Chicago Press.

United States Department of Education, National Institute of Education (1986). Adult literacy initiative, update on adult illiteracy fact sheet. Washington, DC: U.S. Government Printing Office.

Valadez, C.M. (1981). Identity, power, and writing skills: The case of the Hispanic bilingual student. In M.F. Whiteman (Ed.),*Writing: The nature, development and teaching of written communication, Vol. 1: Variation in writing* (pp.167-178). Hillsdale, NJ: Erlbaum.

Vargas, A. (1986). Illiteracy in the Hispanic community. Report of the National Council of La Raza. Washington, DC: National Council of La Raza.

Veltman, F. (1983). *Language shift in the United States.* Berlin: Mouton.

Venezky, R.L., Kaestle, C., & Sum, A. (1987). The subtle danger: Reflections on the literacy abilities of America's young adults. Report No. 16-CAEP-01. Princeton, NJ: Center for the Assessment of Educational Progress, Educational Testing Service.

Vygotsky, L.S. (1978). *Mind in society: The development of higher psychological processes* (M. Cole, V. John-Steiner, S. Scribner, & E. Souberman, Eds.). Cambridge, MA: Harvard University Press .

Wald, B. (1984). A sociolinguistic perspective on Cummins' current framework for relating language proficiency to academic achievement. In C. Rivera (Ed.), *Language proficiency and academic achievement* (pp. 55-70). Avon, England: Multilingual Matters.

Weinberg, M. (1977). *A chance to learn: A history of race and education in the United States.* Cambridge, England: Cambridge University Press .

Weinstein, G. (1984). Literacy and second language acquisition: Issues and perspectives. *TESOL Quarterly, 18* (3), 471-484.

Weller, G. (1983), The role of language as a cohesive force in the Hispanic speech community. In L. Elias-Olivares (Ed.). *Spanish in the U.S. setting: Beyond the Southwest* (pp. 211-233). Rosslyn, VA: National Clearinghouse for Bilingual Education.

Wells, G. (1986). *The meaning makers: Children learning language and using language to learn.* Portsmouth, NH: Heinemann.

Wells, G. (1985). *Language learning and education.* Berkshire, England: NFER-Nelson.

Widdowson, H. (1979). The process and purpose of reading. In H. Widdowson (Ed.), *Explorations in applied linguistics*(pp. 171-183). New York: Oxford University Press.

Wiley, T.G. (1986). The significance of language and cross-cultural barriers for the Euro-American elderly. In C. Hayes *et al.* (Eds.). *The Euro-American eldery: A guide for practice* (pp. 37-50). New York: Springer.

Wiley, T.G., Wrigley, H.S., Burr, R. (1983). Refugee resettlement in Long Beach: Needs, service utilization patterns, and curriculum recommendations. Final project report to the Office of Refugee Resettlement. (ERIC, Document Reproduction Service, ED No. 228-844).

Wright, E. (December, 1980). School English and public policy. *College English, 42* (4), 327-342.

APPENDIX A

GRADE-LEVEL ACHIEVEMENT
CROSSTABULATION
TABLES

TABLE A-1

GRADE-LEVEL ACHIEVEMENT BY REGION OF THE COUNTRY

V497	COUNT / ROW PCT / COL PCT / TOT PCT	V4 CALIF (1)	TEXAS (2)	SWEST (3)	NWEST (4)	ROW TOTAL
1		114	106	26	18	264
LESS THAN 6 YRS		43.2	40.2	9.8	6.8	27.0
		26.7	31.1	16.5	34.0	
		11.6	10.8	2.7	1.8	
2		163	136	65	28	392
6 TO 11 YRS		41.6	34.7	16.6	7.1	40.0
		38.2	39.9	41.1	52.8	
		16.6	13.9	6.6	2.9	
3		150	99	67	7	323
MORE THAN 12 YRS		46.4	30.7	20.7	2.2	33.0
		35.1	29.0	42.4	13.2	
		15.3	10.1	6.8	.7	
COLUMN TOTAL		427	341	158	53	979
		43.6	34.8	16.1	5.4	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
24.92067	6	0.0004	14.292	NONE

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	-0.01071	0.3690

NUMBER OF MISSING OBSERVATIONS = 12

TABLE A-2

GRADE-LEVEL ACHIEVEMENT BY NATIVITY

		R476		
	COUNT / ROW PCT / COL PCT / TOT PCT	U.S. 1.00	MEXICO 2.00	ROW TOTAL
V497				
1		97	167	264
LESS THAN 6 YRS		36.7	63.3	27.0
		16.0	44.7	
		9.9	17.1	
2		230	162	392
6 TO 11 YRS		58.7	41.3	40.0
		38.0	43.3	
		23.5	16.5	
3		278	45	323
MORE THAN 12 YRS		86.1	13.9	33.0
		46.0	12.0	
		28.4	4.6	
COLUMN TOTAL		605	374	979
		61.8	38.2	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
152.41384	2	0.0000	100.854	NONE

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	-0.39361	0.0000

NUMBER OF MISSING OBSERVATIONS = 12

TABLE A-3

GRADE-LEVEL ACHIEVEMENT BY SEX

V497	COUNT / ROW PCT / COL PCT / TOT PCT	V462 MALE (1)	V462 FEMALE (2)	ROW TOTAL
1 LESS THAN 6 YRS		113	151	264
		42.8	57.2	27.0
		29.0	25.6	
		11.5	15.4	
2 6 TO 11 YRS		140	252	392
		35.7	64.3	40.0
		36.0	42.7	
		14.3	25.7	
3 MORE THAN 12 YRS		136	187	323
		42.1	57.9	33.0
		35.0	31.7	
		13.9	19.1	
COLUMN TOTAL		389	590	979
		39.7	60.3	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
4.44195	2	0.1085	104.899	NONE

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	0.00120	0.4851

NUMBER OF MISSING OBSERVATIONS = 12

TABLE A-4

GRADE-LEVEL ACHIEVEMENT BY AGE

R469

V497	COUNT / ROW PCT / COL PCT / TOT PCT	18-25 (1.00)	26-35 (2.00)	36-45 (3.00)	46-55 (4.00)	56-65 (5.00)	66 & OLDER (6.00)	ROW TOTAL
1		21	51	44	57	42	47	262
LESS THAN 6 YRS		8.0	19.5	16.8	21.8	16.0	17.9	26.9
		13.9	16.0	21.5	38.5	51.9	67.1	
		2.2	5.2	4.5	5.9	4.3	4.8	
2		64	125	90	59	30	22	390
6 TO 11 YRS		16.4	32.1	23.1	15.1	7.7	5.6	40.1
		42.4	39.3	43.9	39.9	37.0	31.4	
		6.6	12.8	9.2	6.1	3.1	2.3	
3		66	142	71	32	9	1	321
MORE THAN 12 YRS		20.6	44.2	22.1	10.0	2.8	.3	33.0
		43.7	44.7	34.6	21.6	11.1	1.4	
		6.8	14.6	7.3	3.3	.9	.1	
COLUMN TOTAL		151	318	205	148	81	70	973
		15.5	32.7	21.1	15.2	8.3	7.2	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
153.61016	10	0.0000	18.849	NONE

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	-0.37395	0.0000

NUMBER OF MISSING OBSERVATIONS = 18

TABLE A-5

GRADE-LEVEL ACHIEVEMENT BY AGE OF IMMIGRATION (MEXICAN-BORN)

R1550

V497	5 OR LESS (1.00)	6 TO 8 YEARS (2.00)	9 TO 11 YEARS (3.00)	12 TO 15 YEARS (4.00)	16 TO 18 YEARS (5.00)	19 OR OVER (6.00)	ROW TOTAL
1 LESS THAN 6 YRS	13	4	5	10	23	106	161
	8.1	2.5	3.1	6.2	14.3	65.8	44.6
	56.5	40.0	41.7	33.3	37.7	47.1	
	3.6	1.1	1.4	2.8	6.4	29.4	
2 6 TO 11 YRS	4	2	3	17	32	98	156
	2.6	1.3	1.9	10.9	20.5	62.8	43.2
	17.4	20.0	25.0	56.7	52.5	43.6	
	1.1	.6	.8	4.7	8.9	27.1	
3 MORE THAN 12 YRS	6	4	4	3	6	21	44
	13.6	9.1	9.1	6.8	13.6	47.7	12.2
	26.1	40.0	33.3	10.0	9.8	9.3	
	1.7	1.1	1.1	.8	1.7	5.8	
COLUMN TOTAL	23	10	12	30	61	225	361
	6.4	2.8	3.3	8.3	16.9	62.3	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
27.10500	10	0.0025	1.219	6 OF 18 (33.3%)

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	-0.09047	0.0430

NUMBER OF MISSING OBSERVATIONS = 630

TABLE A-6

GRADE-LEVEL ACHIEVEMENT BY FATHER'S LEVEL OF EDUCATION

		V1536			
	COUNT I				
	ROW PCT I	LESS	6 TO 11	MORE THAN	ROW
	COL PCT I	THAN	YRS	12 YRS	TOTAL
	TOT PCT I	6 YRS 1I	2I	3I	
V497					
1	I	172 I	14 I	1 I	187
LESS THAN 6 YRS	I	92.0 I	7.5 I	.5 I	24.3
	I	36.8 I	6.0 I	1.4 I	
	I	22.4 I	1.8 I	.1 I	
2	I	185 I	91 I	17 I	293
6 TO 11 YRS	I	63.1 I	31.1 I	5.8 I	38.1
	I	39.6 I	39.2 I	24.3 I	
	I	24.1 I	11.8 I	2.2 I	
3	I	110 I	127 I	52 I	289
MORE THAN 12 YRS	I	38.1 I	43.9 I	18.0 I	37.6
	I	23.6 I	54.7 I	74.3 I	
	I	14.3 I	16.5 I	6.8 I	
COLUMN		467	232	70	769
TOTAL		60.7	30.2	9.1	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
148.62791	4	0.0000	17.022	NONE

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	0.42274	0.0000

NUMBER OF MISSING OBSERVATIONS = 222

TABLE A-7

MOTHER'S LEVEL OF EDUCATION BY GRADE-LEVEL ACHIEVEMENT

		V1539			
	COUNT I				
	ROW PCT I	LESS	6 TO 11	MORE THA	ROW
	COL PCT I	THAN	YRS	N 12 YRS	TOTAL
	TOT PCT I	6 YRS 1I	2I	3I	
V497					
1	I	185 I	18 I	1 I	204
LESS THAN 6 YRS	I	90.7 I	8.8 I	.5 I	24.9
	I	39.2 I	6.5 I	1.5 I	
	I	22.6 I	2.2 I	.1 I	
2	I	195 I	112 I	7 I	314
6 TO 11 YRS	I	62.1 I	35.7 I	2.2 I	38.4
	I	41.3 I	40.3 I	10.3 I	
	I	23.8 I	13.7 I	.9 I	
3	I	92 I	148 I	60 I	300
MORE THAN 12 YRS	I	30.7 I	49.3 I	20.0 I	36.7
	I	19.5 I	53.2 I	88.2 I	
	I	11.2 I	18.1 I	7.3 I	
COLUMN		472	278	68	818
TOTAL		57.7	34.0	8.3	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
214.86668	4	0.0000	16.958	NONE

STATISTIC	VALUE	SIGNIFICANCE
KENDALL'S TAU B	0.45649	0.0000

NUMBER OF MISSING OBSERVATIONS = 173

TABLE A-8

GRADE-LEVEL ACHIEVEMENT BY CURRENTLY EMPLOYED

V497	COUNT / ROW PCT / COL PCT / TOT PCT	V319 YES (1)	V319 NO (5)	ROW TOTAL
1 LESS THAN 6 YRS		110	154	264
	ROW PCT	41.7	58.3	27.0
	COL PCT	20.3	35.3	
	TOT PCT	11.2	15.7	
2 6 TO 11 YRS		196	196	392
	ROW PCT	50.0	50.0	40.0
	COL PCT	36.1	45.0	
	TOT PCT	20.0	20.0	
3 MORE THAN 12 YRS		237	86	323
	ROW PCT	73.4	26.6	33.0
	COL PCT	43.6	19.7	
	TOT PCT	24.2	8.8	
	COLUMN TOTAL	543	436	979
		55.5	44.5	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
67.03076	2	0.0000	117.573	NONE

PEARSON'S R -0.25099 0.0000

NUMBER OF MISSING OBSERVATIONS = 12

TABLE A-9

GRADE-LEVEL ACHIEVEMENT BY EVER WORKED FOR PAY

V497	V321 YES (1)	V321 NO (5)	ROW TOTAL
1 LESS THAN 6 YRS	81	33	114
ROW PCT	71.1	28.9	41.3
COL PCT	37.9	53.2	
TOT PCT	29.3	12.0	
2 6 TO 11 YRS	93	25	118
ROW PCT	78.8	21.2	42.8
COL PCT	43.5	40.3	
TOT PCT	33.7	9.1	
3 MORE THAN 12 YRS	40	4	44
ROW PCT	90.9	9.1	15.9
COL PCT	18.7	6.5	
TOT PCT	14.5	1.4	
COLUMN TOTAL	214	62	276
	77.5	22.5	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
7.37958	2	0.0250	9.884	NONE

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	-0.16168	0.0036

NUMBER OF MISSING OBSERVATIONS = 715

TABLE A-10

GRADE-LEVEL ACHIEVEMENT BY WORKED IN 1977-1978

		V320		
	COUNT / ROW PCT / COL PCT / TOT PCT	YES	NO	ROW TOTAL
		1	5	
V497				
1 LESS THAN 6 YRS		40	114	154
	ROW PCT	26.0	74.0	35.3
	COL PCT	25.0	41.3	
	TOT PCT	9.2	26.1	
2 6 TO 11 YRS		78	118	196
	ROW PCT	39.8	60.2	45.0
	COL PCT	48.8	42.8	
	TOT PCT	17.9	27.1	
3 MORE THAN 12 YRS		42	44	86
	ROW PCT	48.8	51.2	19.7
	COL PCT	26.3	15.9	
	TOT PCT	9.6	10.1	
COLUMN TOTAL		160	276	436
		36.7	63.3	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
13.88895	2	0.0010	31.560	NONE

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	-0.17683	0.0001

NUMBER OF MISSING OBSERVATIONS = 555

TABLE A-11

GRADE-LEVEL ACHIEVEMENT BY UNEMPLOYED WANTED TO WORK

V497	V330 YES (1)	V330 NO (5)	ROW TOTAL
1 LESS THAN 6 YRS	41	76	117
	35.0	65.0	31.8
	22.4	41.1	
	11.1	20.7	
2 6 TO 11 YRS	90	80	170
	52.9	47.1	46.2
	49.2	43.2	
	24.5	21.7	
3 MORE THAN 12 YRS	52	29	81
	64.2	35.8	22.0
	28.4	15.7	
	14.1	7.9	
COLUMN TOTAL	183	185	368
	49.7	50.3	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
17.57883	2	0.0002	40.280	NONE

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	-0.21608	0.0000

NUMBER OF MISSING OBSERVATIONS = 623

TABLE A-12

GRADE-LEVEL ACHIEVEMENT BY DESIRE TO NATURALIZE IN THE FUTURE

		V1564			
	COUNT / ROW PCT / COL PCT / TOT PCT	YES 1	NO 5	DON'T KNOW 8	ROW TOTAL
V497					
1		49	52	7	108
LESS THAN 6 YRS		45.4	48.1	6.5	44.3
		38.9	51.5	41.2	
		20.1	21.3	2.9	
2		62	39	8	109
6 TO 11 YRS		56.9	35.8	7.3	44.7
		49.2	38.6	47.1	
		25.4	16.0	3.3	
3		15	10	2	27
MORE THAN 12 YRS		55.6	37.0	7.4	11.1
		11.9	9.9	11.8	
		6.1	4.1	.8	
COLUMN TOTAL		126	101	17	244
		51.6	41.4	7.0	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
3.69180	4	0.4493	1.881	1 OF 9 (11.1%)

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	-0.07754	0.1137

NUMBER OF MISSING OBSERVATIONS = 88

TABLE A-13

GRADE-LEVEL ACHIEVEMENT BY REGISTERED TO VOTE

		V1063		
	COUNT / ROW PCT / COL PCT / TOT PCT	YES 1	NO 5	ROW TOTAL
V497				
1		49	34	83
LESS THAN 6 YRS		59.0	41.0	14.4
		13.9	15.3	
		8.5	5.9	
2		121	102	223
6 TO 11 YRS		54.3	45.7	38.8
		34.3	45.9	
		21.0	17.7	
3		183	86	269
MORE THAN 12 YRS		68.0	32.0	46.8
		51.8	38.7	
		31.8	15.0	
COLUMN TOTAL		353	222	575
		61.4	38.6	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
9.98017	2	0.0068	32.045	NONE

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	-0.09934	0.0086

NUMBER OF MISSING OBSERVATIONS = 70

TABLE A-14

GRADE-LEVEL ACHIEVEMENT BY VOTE IN 1976

		V1060		
	COUNT I			
	ROW PCT I	YES	NO	ROW
	COL PCT I			TOTAL
	TOT PCT I	1I	5I	
V497				
1	I	44	67	111
LESS THAN 6 YRS	I	39.6	60.4	18.3
	I	13.9	23.2	
	I	7.3	11.1	
2	I	105	127	232
6 TO 11 YRS	I	45.3	54.7	38.3
	I	33.1	43.9	
	I	17.3	21.0	
3	I	168	95	263
MORE THAN 12 YRS	I	63.9	36.1	43.4
	I	53.0	32.9	
	I	27.7	15.7	
COLUMN		317	289	606
TOTAL		52.3	47.7	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
25.87584	2	0.0000	52.936	NONE

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	-0.19743	0.0000

NUMBER OF MISSING OBSERVATIONS = 11

TABLE A-15

GRADE-LEVEL ACHIEVEMENT BY BILINGUALISM

		BILING3			
	COUNT / ROW PCT / COL PCT / TOT PCT	ENG MON OR DOM 1.00	SPN MONO OR DOM 2.00	BILINGUAL 3.00	ROW TOTAL
V497					
1		3	192	62	257
LESS THAN 6 YRS		1.2	74.7	24.1	26.9
		2.4	50.5	13.8	
		.3	20.1	6.5	
2		37	168	178	383
6 TO 11 YRS		9.7	43.9	46.5	40.1
		29.6	44.2	39.6	
		3.9	17.6	18.6	
3		85	20	210	315
MORE THAN 12 YRS		27.0	6.3	66.7	33.0
		68.0	5.3	46.7	
		8.9	2.1	22.0	
COLUMN TOTAL		125 13.1	380 39.8	450 47.1	955 100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
301.10445	4	0.0000	33.639	NONE

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	0.09004	0.0027

NUMBER OF MISSING OBSERVATIONS = 36

TABLE A-16

GRADE-LEVEL ACHIEVEMENT BY CHILDHOOD HOME LANGUAGE

V497	V1428	1 ENGLISH ONLY	2 MOSTLY ENGLISH	3 BOTH EQUALLY	4 MOSTLY SPANISH	5 SPANISH ONLY	ROW TOTAL
1 LESS THAN 6 YRS	COUNT			3	29	226	258
	ROW PCT			1.2	11.2	87.6	26.8
	COL PCT			4.2	12.7	39.6	
	TOT PCT			.3	3.0	23.5	
2 6 TO 11 YRS	COUNT	4	17	26	90	250	387
	ROW PCT	1.0	4.4	6.7	23.3	64.6	40.2
	COL PCT	18.2	24.6	36.1	39.3	43.8	
	TOT PCT	.4	1.8	2.7	9.3	26.0	
3 MORE THAN 12 YRS	COUNT	18	52	43	110	95	318
	ROW PCT	5.7	16.4	13.5	34.6	29.9	33.0
	COL PCT	81.8	75.4	59.7	48.0	16.6	
	TOT PCT	1.9	5.4	4.5	11.4	9.9	
COLUMN TOTAL		22	69	72	229	571	963
		2.3	7.2	7.5	23.8	59.3	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
229.94993	8	0.0000	5.894	NONE

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	-0.45321	0.0000

NUMBER OF MISSING OBSERVATIONS = 28

TABLE A-17

GRADE-LEVEL ACHIEVEMENT BY CHILDHOOD NEIGHBORHOOD LANGUAGE

V497	V1429 COUNT / ROW PCT / COL PCT / TOT PCT	1 ONLY ENG	2 MOST ENG	3 BOTH EQUALLY	4 SPANISH ONLY	5 ONLY SPANISH	ROW TOTAL
1 LESS THAN 6 YRS			4	7	38	210	259
			1.5	2.7	14.7	81.1	27.0
			3.8	8.0	16.0	43.6	
			.4	.7	4.0	21.9	
2 6 TO 11 YRS		14	36	43	86	205	384
		3.6	9.4	11.2	22.4	53.4	40.0
		28.6	34.6	48.9	36.3	42.5	
		1.5	3.8	4.5	9.0	21.4	
3 MORE THAN 12 YRS		35	64	38	113	67	317
		11.0	20.2	12.0	35.6	21.1	33.0
		71.4	61.5	43.2	47.7	13.9	
		3.6	6.7	4.0	11.8	7.0	
COLUMN TOTAL		49 5.1	104 10.8	88 9.2	237 24.7	482 50.2	960 100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
230.05788	8	0.0000	13.220	NONE

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	-0.44430	0.0000

NUMBER OF MISSING OBSERVATIONS = 31

TABLE A-18

GRADE-LEVEL ACHIEVEMENT BY LANGUAGE USED IN THE INTERVIEW

V497	V7 1 ENGLISH ONLY	2 MOSTLY ENGLISH	3 BOTH	4 MOSTLY SPANISH	5 SPANISH ONLY	ROW TOTAL
1 LESS THAN 6 YRS	14	3		17	230	264
	5.3	1.1		6.4	87.1	27.0
	3.2	10.3		35.4	50.2	
	1.4	.3		1.7	23.5	
2 6 TO 11 YRS	152	17	8	26	189	392
	38.8	4.3	2.0	6.6	48.2	40.0
	35.2	58.6	66.7	54.2	41.3	
	15.5	1.7	.8	2.7	19.3	
3 MORE THAN 12 YRS	266	9	4	5	39	323
	82.4	2.8	1.2	1.5	12.1	33.0
	61.6	31.0	33.3	10.4	8.5	
	27.2	.9	.4	.5	4.0	
COLUMN TOTAL	432	29	12	48	458	979
	44.1	3.0	1.2	4.9	46.8	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
396.79686	8	0.0000	3.236	3 OF 15 (20.0%)

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	-0.62396	0.0000

NUMBER OF MISSING OBSERVATIONS = 12

TABLE A-19

GRADE-LEVEL ACHIEVEMENT BY BILINGUALISM
(CONTROLLING FOR BORN IN THE USA)

V497	BILING3 ENG OR DOM 1.00	SPN OR DOM 2.00	MONO BILINGUAL 3.00	ROW TOTAL
1 LESS THAN 6 YRS	3	56	36	95
ROW PCT	3.2	58.9	37.9	16.1
COL PCT	2.4	55.4	9.8	
TOT PCT	.5	9.5	6.1	
2 6 TO 11 YRS	36	39	150	225
ROW PCT	16.0	17.3	66.7	38.1
COL PCT	29.0	38.6	41.0	
TOT PCT	6.1	6.6	25.4	
3 MORE THAN 12 YRS	85	6	180	271
ROW PCT	31.4	2.2	66.4	45.9
COL PCT	68.5	5.9	49.2	
TOT PCT	14.4	1.0	30.5	
COLUMN TOTAL	124	101	366	591
	21.0	17.1	61.9	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
174.02545	4	0.0000	16.235	NONE

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	-0.02876	0.2427

NUMBER OF MISSING OBSERVATIONS = 12

TABLE A-20

GRADE-LEVEL ACHIEVEMENT BY BILINGUALISM
(CONTROLLING FOR BORN IN MEXICO)

V497	BILING3 ENG MON OR DOM 1.00	SPN MONO OR DOM 2.00	BILINGUAL 3.00	ROW TOTAL
1 LESS THAN 6 YRS		136	26	162
		84.0	16.0	44.5
		48.7	31.0	
		37.4	7.1	
2 6 TO 11 YRS	1	129	28	158
	.6	81.6	17.7	43.4
	100.0	46.2	33.3	
	.3	35.4	7.7	
3 MORE THAN 12 YRS		14	30	44
		31.8	68.2	12.1
		5.0	35.7	
		3.8	8.2	
COLUMN TOTAL	1 .3	279 76.6	84 23.1	364 100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
58.70323	4	0.0000	0.121	3 OF 9 (33.3%)

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	0.29357	0.0000

NUMBER OF MISSING OBSERVATIONS = 36

TABLE A-21

GRADE-LEVEL ACHIEVEMENT BY LANGUAGE A CHICANO SHOULD SPEAK IN THE USA

V497	V72	ONLY ENGLISH 1	MOSTLY ENGLISH 2	BOTH 3	MOSTLY SPANISH 4	ONLY SPANISH 5	ROW TOTAL
LESS THAN 6 YRS	1	9	41	150	46	14	260
	ROW PCT	3.5	15.8	57.7	17.7	5.4	26.9
	COL PCT	24.3	31.5	22.0	50.5	50.0	
	TOT PCT	.9	4.2	15.5	4.8	1.4	
6 TO 11 YRS	2	15	47	285	31	10	388
	ROW PCT	3.9	12.1	73.5	8.0	2.6	40.1
	COL PCT	40.5	36.2	41.8	34.1	35.7	
	TOT PCT	1.5	4.9	29.4	3.2	1.0	
MORE THAN 12 YRS	3	13	42	247	14	4	320
	ROW PCT	4.1	13.1	77.2	4.4	1.3	33.1
	COL PCT	35.1	32.3	36.2	15.4	14.3	
	TOT PCT	1.3	4.3	25.5	1.4	.4	
COLUMN TOTAL		37	130	682	91	28	968
		3.8	13.4	70.5	9.4	2.9	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
47.42013	8	0.0000	7.521	NONE

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	-0.10953	0.0003

NUMBER OF MISSING OBSERVATIONS = 23

TABLE A-22

GRADE-LEVEL ACHIEVEMENT BY ADVANTAGES OF BEING BILINGUAL IN THE USA

V497	V73 YES	V73 NO	ROW TOTAL
	1	5	
1 LESS THAN 6 YRS	242	13	255
ROW PCT	94.9	5.1	26.5
COL PCT	27.1	19.4	
TOT PCT	25.2	1.4	
2 6 TO 11 YRS	352	33	385
ROW PCT	91.4	8.6	40.1
COL PCT	39.4	49.3	
TOT PCT	36.6	3.4	
3 MORE THAN 12 YRS	300	21	321
ROW PCT	93.5	6.5	33.4
COL PCT	33.6	31.3	
TOT PCT	31.2	2.2	
COLUMN TOTAL	894	67	961
	93.0	7.0	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
2.99070	2	0.2242	17.778	NONE

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	0.01801	0.2886

NUMBER OF MISSING OBSERVATIONS = 30

TABLE A-23

GRADE-LEVEL ACHIEVEMENT BY ADVANTAGES
TO BEING BILINGUAL IN THE USA

		V74					
	COUNT / ROW PCT / COL PCT / TOT PCT	SELF EST 10	CULTURES 11	PRIDE 12	COMMUNIC 13	REPUT 14	FAM-ADVN 16
V497							
1 LESS THAN 6 YRS		3	2	1	63	2	4
		1.3	.9	.4	27.0	.9	1.7
		60.0	8.0	16.7	26.8	22.2	100.0
		.3	.2	.1	7.2	.2	.5
2 6 TO 11 YRS			9	4	88	5	
			2.6	1.1	25.3	1.4	
			36.0	66.7	37.4	55.6	
			1.0	.5	10.0	.6	
3 MORE THAN 12 YRS		2	14	1	84	2	
		.7	4.7	.3	28.1	.7	
		40.0	56.0	16.7	35.7	22.2	
		.2	1.6	.1	9.5	.2	
COLUMN TOTAL		5 .6	25 2.8	6 .7	235 26.7	9 1.0	4 .5

NOTE: THIS TABLE CONTINUES ON THE NEXT PAGE

TABLE A-23

GRADE-LEVEL ACHIEVEMENT BY ADVANTAGES
TO BEING BILINGUAL IN THE USA

V497	COUNT / ROW PCT / COL PCT / TOT PCT	V74 SELF EST (10)	CULTURES (11)	PRIDE (12)	COMMUNIC (13)	REPUT (14)	FAM-ADVN (16)
1 LESS THAN 6 YRS		3	2	1	63	2	4
		1.3	.9	.4	27.0	.9	1.7
		60.0	8.0	16.7	26.8	22.2	100.0
		.3	.2	.1	7.2	.2	.5
2 6 TO 11 YRS			9	4	88	5	
			2.6	1.1	25.3	1.4	
			36.0	66.7	37.4	55.6	
			1.0	.5	10.0	.6	
3 MORE THAN 12 YRS		2	14	1	84	2	
		.7	4.7	.3	28.1	.7	
		40.0	56.0	16.7	35.7	22.2	
		.2	1.6	.1	9.5	.2	
COLUMN TOTAL		5 .6	25 2.8	6 .7	235 26.7	9 1.0	4 .5

NOTE: THIS TABLE CONTINUES ON THE NEXT PAGE

TABLE A-24

GRADE-LEVEL ACHIEVEMENT BY SHOULD PARENTS DISCOURAGE SPANISH

V497	V81 YES (1)	V81 NO (5)	ROW TOTAL
LESS THAN 6 YRS (1)	1	258	259
	.4	99.6	26.8
	10.0	26.9	
	.1	26.7	
6 TO 11 YRS (2)	5	381	386
	1.3	98.7	39.9
	50.0	39.8	
	.5	39.4	
MORE THAN 12 YRS (3)	4	319	323
	1.2	98.8	33.4
	40.0	33.3	
	.4	33.0	
COLUMN TOTAL	10	958	968
	1.0	99.0	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
1.45323	2	0.4835	2.676	3 OF 6 (50.0%)

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	-0.03093	0.1682

NUMBER OF MISSING OBSERVATIONS = 23

TABLE A-25

GRADE-LEVEL ACHIEVEMENT BY WANT CHILD TO SPEAK SPANISH

		V1497		
	COUNT / ROW PCT / COL PCT / TOT PCT	YES 1	NO 5	ROW TOTAL
V497				
1 LESS THAN 6 YRS		250	3	253
		98.8	1.2	26.8
		26.7	50.0	
		26.5	.3	
2 6 TO 11 YRS		377	1	378
		99.7	.3	40.1
		40.2	16.7	
		40.0	.1	
3 MORE THAN 12 YRS		310	2	312
		99.4	.6	33.1
		33.1	33.3	
		32.9	.2	
	COLUMN TOTAL	937	6	943
		99.4	.6	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
2.03460	2	0.3616	1.610	3 OF 6 (50.0%)

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	-0.02378	0.2329

NUMBER OF MISSING OBSERVATIONS = 48

TABLE A-26

GRADE-LEVEL ACHIEVEMENT BY WANT CHILD TO BE BILITERATE

V497	V1463 1 STRONGLY AGREE	2 AGREE	3 DISAGREE	4 STRONGLY DISAGREE	ROW TOTAL
1 LESS THAN 6 YRS	76	174	2		252
	30.2	69.0	.8		26.4
	30.2	26.3	4.9		
	8.0	18.2	.2		
2 6 TO 11 YRS	94	277	13		384
	24.5	72.1	3.4		40.2
	37.3	41.9	31.7		
	9.8	29.0	1.4		
3 MORE THAN 12 YRS	82	210	26	1	319
	25.7	65.8	8.2	.3	33.4
	32.5	31.8	63.4	100.0	
	8.6	22.0	2.7	.1	
COLUMN TOTAL	252	661	41	1	955
	26.4	69.2	4.3	.1	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
23.92121	6	0.0005	0.264	3 OF 12 (25.0%)

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	0.09189	0.0022

NUMBER OF MISSING OBSERVATIONS = 36

TABLE A-27

GRADE-LEVEL ACHIEVEMENT BY REASON CHICANOS RECEIVE A POOR EDUCATION AND LOWER EMPLOYMENT SUCCESS

		V1017			
	COUNT / ROW PCT / COL PCT / TOT PCT	NO OPPORTUNITY 1	OWN FAULT 2	OTHER 3	ROW TOTAL
V497					
1		106	155	1	262
LESS THAN 6 YRS		40.5	59.2	.4	26.9
		21.4	32.9	12.5	
		10.9	15.9	.1	
2		177	211	4	392
6 TO 11 YRS		45.2	53.8	1.0	40.2
		35.7	44.8	50.0	
		18.2	21.6	.4	
3		213	105	3	321
MORE THAN 12 YRS		66.4	32.7	.9	32.9
		42.9	22.3	37.5	
		21.8	10.8	.3	
COLUMN TOTAL		496 50.9	471 48.3	8 .8	975 100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
49.11419	4	0.0000	2.150	3 OF 9 (33.3%)

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	-0.19453	0.0000

NUMBER OF MISSING OBSERVATIONS = 16

TABLE A-28

GRADE-LEVEL ACHIEVEMENT BY REASON CHICANOS DON'T GO TO COLLEGE

V497	V1020 1 NOT IMPORT	2 NOT PREPARED	3 OTHER	ROW TOTAL
1 LESS THAN 6 YRS	36	158	61	255
	14.1	62.0	23.9	26.9
	24.3	28.1	25.5	
	3.8	16.6	6.4	
2 6 TO 11 YRS	55	227	98	380
	14.5	59.7	25.8	40.0
	37.2	40.4	41.0	
	5.8	23.9	10.3	
3 MORE THAN 12 YRS	57	177	80	314
	18.2	56.4	25.5	33.1
	38.5	31.5	33.5	
	6.0	18.7	8.4	
COLUMN TOTAL	148	562	239	949
	15.6	59.2	25.2	100.0

CHI-SQUARE	D.F.	SIGNIFICANCE	MIN E.F.	CELLS WITH E.F.< 5
2.97945	4	0.5613	39.768	NONE

STATISTIC	VALUE	SIGNIFICANCE
PEARSON'S R	-0.01656	0.3052

NUMBER OF MISSING OBSERVATIONS = 42

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